FINANCIAL STABILITY

review

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Dislocation and the retreat from risk

The shocks that have impinged on the world economy and the financial system have been far-reaching. In all financial markets the retreat from risk has been the most outstanding feature.

Equity prices and financial stability

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Issues from the international crisis

The crises has highlighted weaknesses in the international financial system. Some of the issues that policy-makers are considering in their efforts to improve the stability of the system are discussed.

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FINANCIAL SECTOR ISSUES

Over the past year the world economy and financial system have undergone a series of shocks. The Asian financial crisis, starting in mid-1997 and continuing through 1998, seriously impaired growth prospects in the region and led to a general reappraisal of risk. Over the summer of 1998 the economic and political crisis in Russia was the trigger for renewed disturbances across emerging markets, and the introduction of capital controls in Malaysia may have added to market perceptions of risk. In this environment there has been a significant reversal of private capital flows to emerging countries, and increasing evidence of capital flight from investors; swings in asset prices causing loss to financial institutions; a contraction (at least in the United States) of wholesale market lending; and in most countries a shift from equities to bonds and from private sector to government credit.

The retreat from risk

In all financial markets the main recent feature has been a retreat from risk. As the charts show, relative to prime risk-free government bonds, other assets have become significantly cheaper. The flight to quality is reflected in the continued falls in Asian and other emerging market share indices (Charts 1-2), and in the steep increases in yields on emerging market debt (Chart 3). But it is also reflected in G7 markets. The main equity markets have been volatile and on balance have been sharply down (Charts 4 and 5). The UK yield gap has widened sharply (Chart 6). And credit spreads — those of banks and corporates relative to governments — have increased sharply (Chart 7).

Articles in this issue of *Financial Stability Review* describe how the international crisis evolved and the intense policy debate that these developments have prompted.

Financial fragility

Dislocation on this scale is bound to have an impact on financial intermediaries, and there has been a series of announcements over recent months from banks about likely provisioning. Exposures to emerging markets had increased rapidly over the five years before the crisis. Data from the Bank for International Settlements (BIS) show that lending from BIS area banks to non-BIS customers (mainly emerging markets) rose from $692bn in mid-1992 to $1120bn at the end of 1997. Within this, lending by German banks grew more rapidly than lending by US or Japanese banks, and UK bank exposures grew relatively little. German and Japanese banks have been especially prominent in lending to East Asian countries. Japanese banks have generally reduced their lending to East Europe and Latin America over the same period: German banks increased their lending to all regions. US banks increased their exposures to Russia significantly.

The exposures of banks and other financial institutions are not limited to direct loans to entities in the countries concerned. They may also be at risk as a result of their lending to companies dependent on particular markets or through their exposures to investors with commitments in emerging markets.

Hedge funds

There is no uniform definition of a hedge fund and therefore no single estimate of their size. The population used in performance measurement ranges from 1,000 to more than 4,000 funds, with funds under management of between $80bn and $400bn. They are generally unregulated because of their wholesale nature and cannot be directly marketed to the public. Typically they use leverage, arbitrage various securities, and take positions in a range of financial market instruments. The managers charge a material incentive fee.

These funds' investment strategies fall into two main groups: the macro group, which aims to realise profits from significant shifts in financial markets following economic changes on a national or global level; and the hedging/arbitrage group, which attempts to benefit from perceived pricing anomalies. Capital funds for investment come usually from high net-worth individuals (introduced directly or as part of a private client banking relationship) or institutions.

A number of hedge funds have reported substantial losses as a result of movements in global markets this summer. These reflected exposures to emerging market debt, but also the sustained widening of credit spreads in a number of western markets.

Should hedge funds be regulated?

The highly-publicised losses at Long-Term Capital Management (LTCM) were mainly of the latter kind: they reportedly reduced LTCM's net assets to $600m (from $4.8bn at the beginning of 1998). LTCM may now be able to close out positions in an orderly manner after assistance, which was announced in September, from a consortium of 14 banks which has taken effective control of the fund.

The decision to support LTCM reflected a concern that, in the fragile market environment of the time, the rapid unwinding of the fund's book would have adverse effects on the liquidity of a number of the markets in which the fund was exposed — even though the firm had some net worth and most of its exposures to the counterparties were collateralised. In this sense — and also because of its sheer scale — it was *sui generis*: other hedge funds have announced losses and become insolvent in recent months without adverse market effects and without any suggestion of counterparty support. This episode has led to increased supervisory interest in hedge funds and their interaction with markets and supervised institutions.

One question is whether hedge funds should themselves be regulated. The objections to doing so are part philosophical, part practical. At the level of principle, the purpose of regulating a mutual investment fund is generally to protect the investors in it from excessive risk-taking and loss. But the investors in hedge funds have deliberately embraced a high-risk, high-reward strategy outside the regulated sector: in a sense, they buy the product precisely because it

One commercial bank announced a very large provision arising from a structured position in LTCM, and some others had small unsecured exposures

is unregulated. The question may rather be whether the market itself needs protection from the activities of these active and highly-leveraged investors. But hedge funds are not the only big players in markets, and it is not clear why they, uniquely among investors, should be singled out. And the practical question is whether the constituency could be defined sufficiently closely, or indeed would be within the reach of regulators. It could simply move further offshore or, as pointed out by Alan Greenspan, the chairman of the Federal Reserve Board, into "cyberspace".

More relevant to regulation, and to the containment of systemic risk, is whether regulated institutions are adequately monitoring and controlling their exposures to these funds. Although one commercial bank announced a very large provision arising from a structured position in LTCM, and some others had small unsecured exposures, most banks acting as counterparties have found their collateral adequate or nearly adequate to cover their exposures.

Some issues remain. One is the extent to which banks and their regulators recognise sectoral concentrations in their lending and exposures. Another is the adequacy of banks' risk management procedures — whether banks with exposures to hedge funds were aware of the level of gearing and the quality of the book, or simply accepted the relative lack of transparency of their operations. Related to this is the extent of margining and the regulatory recognition of collateral in reducing risk weightings. A key question is what percentage margin counterparties should require to protect themselves against sudden falls in the market price of collateral taken.

A wider issue is whether continuing disintermediation is bringing about structural pressures for commercial banks to allocate significant parts of their portfolios to relatively risky assets. This may lead to some tension between the general expectation that large-bank liabilities are very low risk, and the risk-characteristics of the assets which back them.

Risks from the UK slowdown

The changed financial environment affects national economies in different ways: but there is clearly a deterioration in the international outlook for growth and an increase in the number and intensity of downside risks to output.

Given this outlook, it is worth comparing indicators of UK financial stability currently with the early stages of the previous economic slowdown in the late 1980s/early 1990s.

There are some important differences. The previous economic slowdown was preceded by a much larger tightening in monetary policy. Short-term official interest rates increased by 7 per cent in nominal terms and 4 per cent in real terms in the late-1980s, compared

Chart 1 Asian Equity Markets

Chart 2 Asian Equity Markets

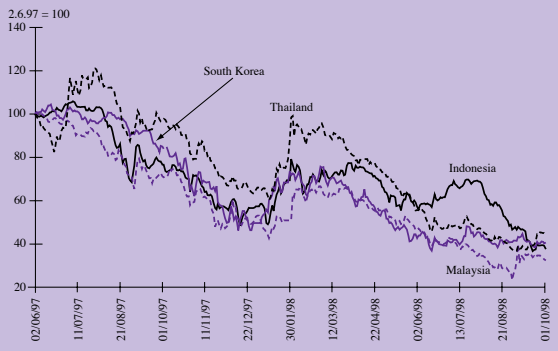


Chart 3 Latin American Spreads over US Treasuries

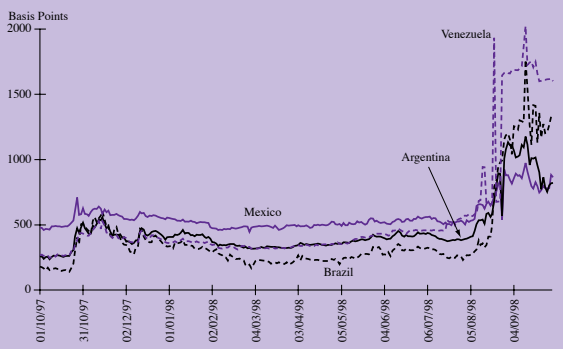


Chart 4 London Equity Indices

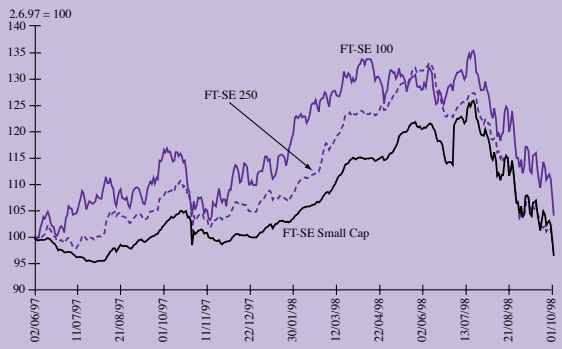


Chart 5 World Equity Indices

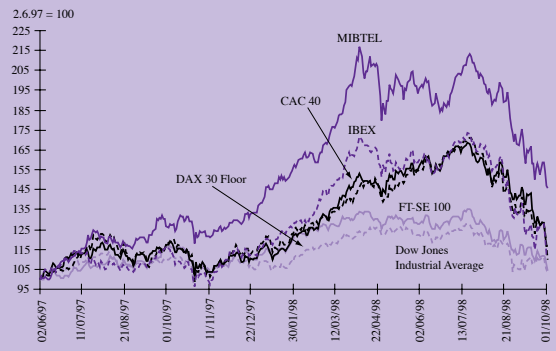


Chart 6 UK Implied Yield Gap

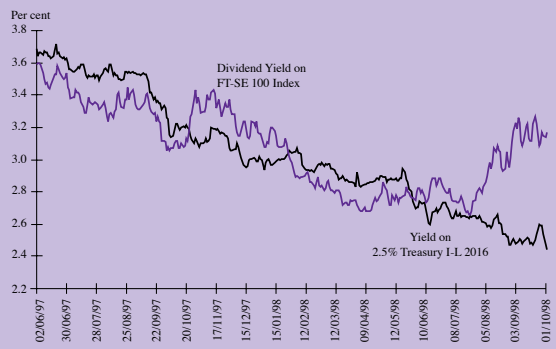
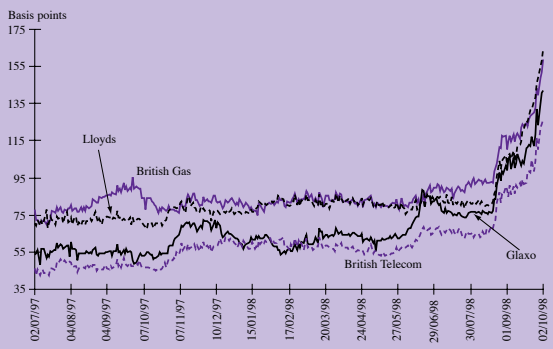


Chart 7 UK Credit Spreads



Although the number of corporate liquidations is slightly higher now than in the late 1980s, the liquidation rate is probably lower

with a more modest 1¾ per cent and ½ per cent respectively over the past two years. On the other hand, the real exchange rate has strengthened over the past few years, whereas it fell in the late-1980s. This will affect the composition of the slowdown.

Comparing indicators of financial fragility in the early stages of the slowdown in economic growth in the late 1980s (1989) with the current one (1998 H1) shows the following:

- the corporate sector is, in aggregate at least, more financially robust currently than ten years ago. With much lower nominal interest rates, ICCs' income gearing is currently much lower than before. The ICCs' financial deficit is currently 2 per cent of GDP (1998 Q2) compared with 4 per cent in 1989. Although the number of corporate liquidations is slightly higher now than in the late 1980s, the liquidation rate is probably lower given there has been an increase in the number of companies in the meantime. Debt levels of industrial and commercial companies (ICCs), whether measured relative to post-tax profits or the replacement cost of the capital stock, are no higher now. Capital gearing has been broadly flat over the last couple of years, whereas it rose substantially during the late 1980s, particularly amongst small firms. Liquidity too now appears stronger. Of course, these aggregate numbers mask differences across industrial sectors. For example, sectoral data from Datastream suggest that the capital gearing in the chemical and pharmaceutical industries is much higher now than in the late 1980s.
- the personal sector too is generally financially stronger than before, although there are areas of fragility. Total debt/income has been flat while debt/wealth has fallen during the 1990s. Moreover, housing wealth looks more secure this time, both because the house price/earnings ratio is significantly lower at the outset of this slowdown, and because increases in interest rates in the past two years have been much smaller than ten years ago. The fall in UK equity prices since the peak in July will have added perhaps 1 per cent to the ratio of household debt/net wealth. This remains, though, below the peak of the last recession. On the other hand, consumer credit is significantly higher now relative to incomes and has grown more quickly in the second half of the 1990s than during the 1980s. We are also starting this downturn with three times as many personal bankruptcies as in the late 1980s;
- the banks, in aggregate, are entering this downturn in financial good shape. Profits at the

"big four" UK clearers are twice as large relative to assets as in 1989 and capital ratios have increased markedly in recent years. Banks and building societies are also currently enjoying much wider spreads between mortgage rates and deposit rates than they did ten years ago. UK banks have switched away from lending to the property and construction sectors, which historically have been the two riskiest loan categories, and companies generally are less dependent on bank finance than they were ten years ago. As noted, UK banks have been more cautious than those of some other countries in increasing their direct exposures to emerging markets during the 1990s.

Operational risk

The previous issue of *Financial Stability Review* described the risks to the financial system arising from the Year 2000 computer problem. The Bank of England has recently issued its third "Blue Book", which describes the work taking place in the UK financial sector, and internationally, to update and test systems. Attention is now turning to contingency planning, especially in large systems that support trading. The UK's Financial Services Authority (FSA) continues to take a close interest in the plans of banks and other intermediaries.

A more immediate concern is the forthcoming euro conversion, which will happen at the turn of the year. Although the UK is not an "in" country, the City of London's wholesale financial markets will be a key centre for trading euro instruments. These markets must undertake a major conversion operation: and they will be affected by any operational problems arising in other European centres.

Over the long weekend between 31 December and 4 January, institutions involved in the wholesale financial markets will need to:

- convert cash and securities balances and open trades into euro, using a variety of methods, and then reconcile them with other institutions. In many cases, this will be in addition to year-end processing.
- implement changes across a broad range of IT systems to accommodate the euro, eg trading, risk management and cash and liquidity management systems, and links to the new euro payments infrastructure.
- At the same time, providers of market infrastructure, including euro RTGS systems and TARGET, and securities settlement systems, will make final preparations.

This is a complex exercise and could result in operational problems in individual market firms, in the custody and settlement of securities, or in payments systems. Firms could experience shortages of liquidity because they do not receive payments they expect, or

UK banks have been more cautious than those of some other countries in increasing their direct exposures to emerging markets during the 1990s

cannot execute financing transactions in securities, such as repos. If payments and securities transactions fail to settle, this could in turn cause further settlement failures as firms are left short of cash or securities. Firms may for a while be unable to trade, leading to, or prolonging, exposure to market movements.

Because of these potential difficulties firms are likely to avoid large trades near the year-end and to manage positions cautiously. Markets in the euro could therefore open on a quiet note in 1999.

Given the extensive preparations undertaken and the testing and dress-rehearsals now taking place in the London market and elsewhere, there is no reason to attach a high probability to any of these risks. Nevertheless it is prudent to recognise the possibility of disruption, and to have contingency plans. Central banks and regulators are already in touch on these issues and will closely monitor the run-up, and the conversion operation itself.

The Securities Settlement Priorities Review

London currently offers an efficient and safe securities settlement infrastructure. However, it is important that this infrastructure continues to develop if London is to retain its place as the pre-eminent international financial centre.

With this in mind, the Bank of England recently conducted the *Securities Settlement Priorities Review*, to identify an order of priorities for development in the coming years. The findings of the *Review* were published on 18 September and a summary of the findings is shown opposite.

It is important that London continues to develop if it is to remain the pre-eminent international financial centre.

The priority is the consolidation of settlement within a single system — a system which encompasses gilts, equities and money market instruments. Consolidation will reduce the cost of settlement, and will improve efficiency by allowing different instruments wherever possible to settle on the same basis.

It will also facilitate important further developments, in particular the enhancement of Delivery versus Payment to allow trades to settle against payment in central bank funds, and the development of links between UK and overseas systems to facilitate UK investors' access to foreign securities.

Following completion of the Review, the Bank and CRESTCo announced that CRESTCo will assume responsibility for the settlement of gilts and money market instruments in 1999. The aim is fully to integrate gilts in the CREST system in 2000.

Full integration of money market instruments is legally and technically more complex, and will follow once an approach has been found which meets the needs of issuers and investors in the money markets.

These and other future developments should help to ensure that London's infrastructure remains internationally competitive.■

The key recommendations of the Securities Settlement Priorities Review.

Merger between CGO and CREST

CGO and CREST should merge. The merged system should be operated by CRESTCo, with the public interest reflected through representation on the CRESTCo board. Full merger between the two systems should be preceded by the transfer to CRESTCo of ownership and responsibility for operating CGO once the necessary legal and contractual framework is in place.

Money market instruments: the future of CMO

Money market settlement arrangements should be further developed, as far as possible by more fully integrating money market instruments into gilt/equity settlement arrangements. Detailed discussions should commence with practitioners, issuers and service providers to assess any steps which might facilitate such integration, and the implications of any legal, technical or operational changes for the operation of the money markets.

CRESTCo should assume responsibility for the operation of CMO at the same time it assumes responsibility for CGO.

Delivery versus Payment arrangements

DvP is a potentially important development, but its implementation will require further extensive preparatory work. Work should recommence on defining the preferred "model" of DvP and identifying the range of options for handling collateral efficiently. At least in the early stages, work will be largely analytical and could take place in parallel with work on other projects. Technical design work can only realistically commence once further development and design resources are freed from existing and prospective projects, including merger.

At a high level the next steps will be as follows:

- A number of detailed changes will need to be made to the legal and contractual framework to permit CRESTCo to assume responsibility for the settlement of gilts and money market instruments;
- CRESTCo can then assume responsibility for operating CGO and CMO;
- further discussions will take place with practitioners about changes to existing CREST and CGO systems considered essential ahead of merger;
- practitioners and issuers will be consulted in more detail about current settlement arrangements in relation to the wider needs of the money markets, including about the scope for integration of money market instruments into CREST;
- various functional changes will need to be made to CREST ahead of full system merger between CREST and CGO, including:
- changes to reflect differing gilt and equity market practices;
- changes to existing systems deemed essential ahead of merger;
- full merger of CGO and CREST can then take place;
- the analysis of full-scale DvP models will be progressed, and an assessment made of the necessary changes to the technical and legal framework;
- the technical design of the preferred model of full-scale DvP will need to be completed and implemented in CREST;
- in parallel, CRESTCo will develop its links with overseas systems.

Equity Prices and Financial Stability

by Richard Brealey and Anne Vila, Bank of England[1]

In July 1998 equity prices in the UK reached a new high. Over the next three months prices both fluctuated sharply and fell by some 25 per cent. This sudden reversal was at least partly a response to new evidence of the slow-down in British economic activity, and the economic turmoil in many emerging markets. However, many observers believed that the decline in equity prices was not simply a consequence of unforeseen events but was a natural reaction to an irrational equity "bubble". In this article, we discuss why the Bank of England should be concerned with fluctuations in equity prices and we look at the evidence of overpricing.

The Bull Market of the 1990s

From the beginning of 1980 to July 1998 investors in UK equities enjoyed a compound return of almost 20 per cent a year. The average annual difference during this period between the return on UK equities and the long-term rate of interest was over 14 per cent a year.

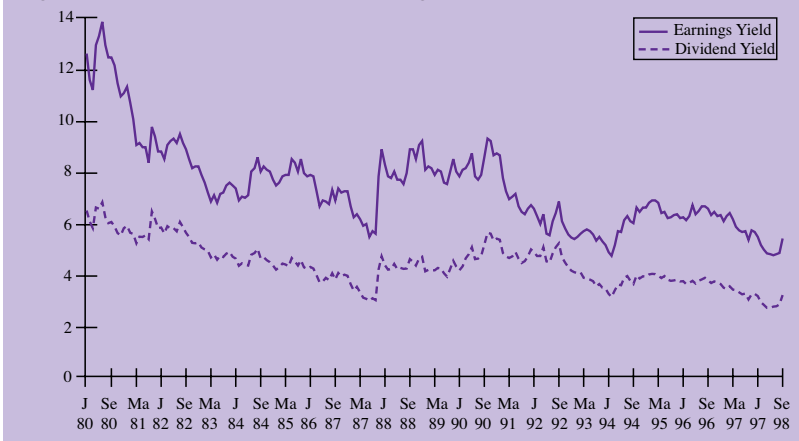
Thus, despite hiccups in the spring of 1990 and October 1997 and a severe attack of indigestion in October 1987, the market provided substantially higher returns than fixed interest securities over a period of nearly 20 years. Figure 1 shows that, although dividends rose sharply, they did not keep pace with share prices, and dividend yields fell from about 6.5 per cent at the start of the period to 2.8 per cent at the end. The earnings yield (the reciprocal of the p/e ratio) also fell — from 12.7 per cent to 5 per cent. Thus much of the gain in equity prices reflected a change in the rate at which investors were prepared to capitalise dividends and earnings.

This prolonged bull market together with the low level of dividend and earnings yields led many observers to wonder how far equity prices were sustainable. Among the other features that gave rise to concern were the sharp increase in merger activity and the substantial flows of cash into unit trusts. The latter prompted the suggestion that these purchases by private investors might be motivated by the belief that the gains of recent years were likely to be repeated and that any disappointment could lead to a rapid reversal in prices. Of course, this argument could be (and sometimes was) stood on its head, for the increased private investment was offset by net disposals of equities by institutional investors.

Despite these concerns, markets through mid-1998 were not unusually volatile. For example, Figure 2 shows the volatility of equity returns, as measured by the variability (standard deviation) of daily price changes measured over 20-day periods. While there was a burst in volatility around the onset of the Asian crisis in October 1997, market volatility during 1997/98 was not untypically high.

Unfortunately, there is relatively little predictability in volatility levels and major market corrections have a habit of coming out of the blue.

Figure 1 Dividend and earnings yield (Jan 1990 – Sept 1998)



Source: DATASTREAM

Equity prices, monetary policy and financial stability

Why should the Bank of England be interested in the level or volatility of equity prices? There are two reasons, each stemming from the Bank's core responsibilities.

The first arises from its responsibility to ensure that inflation is kept within specified bounds. UK equities, held directly or indirectly through pension funds or life insurance companies, make up about 60 per cent of total financial assets of the personal sector in the UK. As a result, the level of equity prices may influence consumption and savings decisions and thereby affect the inflation outlook. In addition, changes in share prices may stem from changes in the returns that investors require and so may influence the level of corporate investment. Although there is considerable debate about the strength of these effects, both factors suggest that movements in equity prices could have implications for the inflation outlook which could warrant offsetting changes in monetary policy.

The second reason that the Bank needs to be concerned about the level of equity prices arises from its second core purpose — that of ensuring the stability of the financial system. As the worldwide behaviour of equity markets in October 1987 illustrated, a sharp fall in equity prices can place major short-term strains on the markets. Some of these problems arise simply from the substantial volume of transactions which may affect the capacity of the market to process the orders and disseminate prices. In order-driven markets a large and sudden order imbalance may eliminate many of the existing limit orders and so lead to exaggerated swings in equity prices and impede investors' ability to assess the equilibrium level of equity prices. This problem is likely to be exacerbated when investors follow some form of programme trading strategy that involves selling on market declines.

Dealer markets are in principle better equipped to handle order imbalances, but the ability of dealers to provide liquidity can be impaired by cash-flow problems caused by rapid changes in equity prices. These cash-flow problems arise from increased margin calls on futures and options positions and a reduced willingness of lenders to extend credit lines to dealers.

In addition to these transitory operational problems, a major change in prices can have more widespread stability implications. There is substantial empirical evidence that financial crises are associated with major reversals in asset prices. For example, Benston *et al* have documented a strong inverse relationship in the US between equity prices and the number of bank failures.[2]

This link between equity prices and financial instability is not necessarily a causal one. In part, falling equity prices may simply be the messenger that heralds lower economic activity and therefore the reduced ability of companies and individuals to service their debt.[3] Nevertheless, it is usually the causal relationship that receives most attention. For example, rising asset prices may encourage banks and financial markets to expand the availability of credit, and enable firms and households to increase their purchases of capital goods. Yet, when asset prices fall substan-

tially, those additions to capital may seem in hindsight unwarranted, personal consumption and corporate investments may be reduced and the loans that supported the earlier capital acquisitions ill-judged.

Because of their pivotal role in the financial infrastructure, the equity exposure of financial intermediaries is of particular concern to the central bank. How serious a concern depends on the equity exposure of the banking sector, the adequacy of risk management by banks and non-bank financial intermediaries and the nature of risk sharing agreements between non-bank intermediaries and their clients.

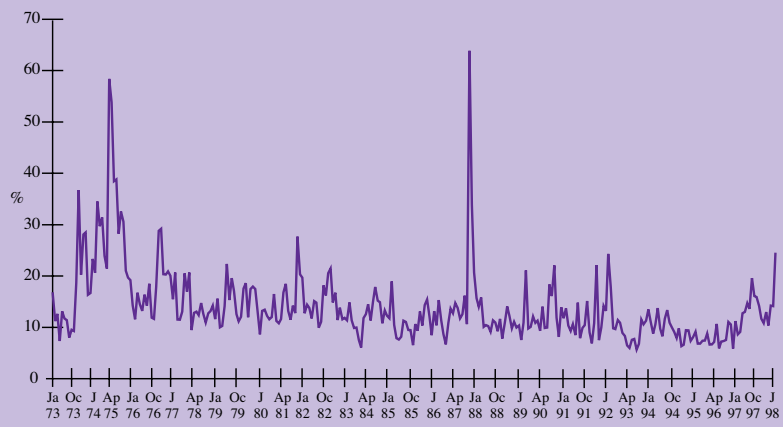
At the beginning of 1998 equities represented only 4 per cent of the total assets held by UK banks and therefore these banks had relatively limited direct exposure to changes in equity prices. The banks' exposure to equity risk is, however, not restricted to these direct share holdings. Further indirect exposure arises from a wide variety of dealings with counterparties, such as securities firms, whose collateral and credit standing may be affected by falling equity prices. Moreover, since equities are (imperfect) substitutes for other speculative assets such as property, changes in equity prices are correlated with changes in property values.

Thus falling equity prices often go hand-in-hand with falling property prices and with a rise both in insolvencies in the construction and property sectors and in arrears on residential mortgages.

With the proliferation of professional asset management, a growing share of savings is channelled through a relatively small group of institutional investors. At the beginning of 1998, UK non-bank financial intermediaries held 64 per cent of UK corporate securities.[4] A substantial proportion of these are invested directly on behalf of individuals by unit trusts or by insurance companies in the form of unit-linked policies. In these cases a decline in equity prices does not affect the solvency of the institution, though it is likely to affect the wealth and spending decisions of the investors concerned.

Of the remaining equities, by far the largest portion is held by pension funds.[5] Because most pension plans involve a defined benefit, a large decline in equity prices may require the plan sponsor

Figure 2 Annualised daily return volatility (1973–1998)



Source: DATASTREAM

to make additional contributions to ensure that the plan is adequately funded. However, since many pension funds are currently in surplus and in any case additional contributions towards full funding may be spread over several years, even a substantial fall in equity prices is unlikely to produce short-term insolvencies.

To conclude, a large fall in equity prices can cause short-term disruption to markets and is likely to affect the balance sheets of a large number of households, corporations and financial intermediaries. Therefore the Bank of England has a responsibility to monitor equity markets and ensure that the UK financial system could cope with a prolonged fall in prices. But some commentators have argued that the role of a central bank should go beyond ensuring that the system is robust and that the central bank should also take active steps to influence the level of equity prices. In their view central banks should seek to prick asset price "bubbles" by raising interest rates or even by intervening directly in the equity market before the bubble bursts of its own accord.[6]

The difficulty with such arguments is that financial markets are highly competitive, so that bubbles are easy to spot only after the event. Market prices impound the views of a large number of skilled and industrious investors and it is unlikely that central bankers are endowed with any unusual ability to predict equity prices.

The sources of equity market values

We noted earlier that the unease about equity prices in mid-1998 arose partly from the prolonged nature of the rise and the historically low yields. Such a reaction is not without justification. For example, several studies have suggested that there is indeed some long-term mean reversion in stock prices[7] and that low dividend yields herald below-average returns.[8] However, the jury is still out as to whether these observations reflect speculative excesses, or indicate rational changes in the return that investors require from equities, or are just coincidences that stem from an intensive search for such patterns.

To understand more clearly the assumptions that are implicit in equity market prices, it is helpful to make use of the dividend discount model which states that the value of equities is equal to the expected stream of dividends discounted by the return that investors require. Practical application of this "dividend discount model" requires some simplifying assumptions. The most common are to assume that investors discount each future dividend at the same rate and that the expected dividend growth is constant.

In this case, there is the following simple relationship between the equilibrium price of a share, the prospective dividend, the expected dividend growth, and the return that investors require:

But some commentators have argued that the role of a central bank should go beyond ensuring that the system is robust and that the central bank should take active steps to influence the level of equity prices

The required return on equities is the sum of the risk-free interest rate (the reward for waiting) and the risk premium (the reward for worrying)

Price = prospective dividend/ (required return - expected dividend growth)

Equivalently, the prospective dividend yield in equilibrium is equal to the difference between the return that investors require from equities and the expected growth in dividends:

Prospective dividend yield = required return - expected dividend growth

Notice that these relationships hold both in nominal terms (that is, the dividend yield equals the difference between the nominal required return and the nominal dividend growth) and in real terms (that is, the yield equals the difference between the real required return and the real dividend growth).

We now use these simple relationships to think first, why prices may have risen in recent years and second, about the assumptions that were implicit in the level of prices in mid-1998. Given our earlier cautionary comments, we leave it to the reader to judge the reasonableness of these assumptions.

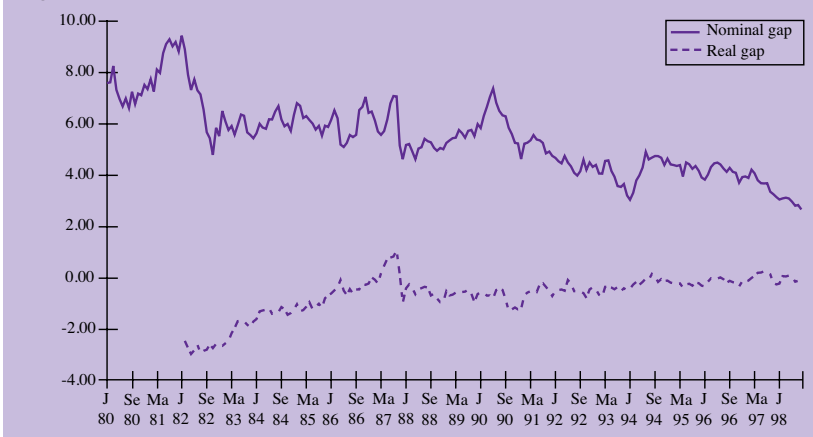
Can the change in equity yields be explained by a fall in required returns?

British government bonds promise a risk-free rate of interest. If equities were risk-free, investors would be satisfied with the same rate of interest. But they are not risk-free and investors therefore demand a premium for taking on the uncertainty of equity investment. Thus the required return on equities is the sum of the risk-free interest rate (the reward for waiting) and the risk premium (the reward for worrying). We cannot observe the required risk premium or whether it changes, but we can observe the rate of interest. So a useful starting point is to ask how far changes in the interest rate can explain the fall in equity yields that characterised most of the 1990s. If the risk premium and the expected dividend growth are unchanged, then a one percentage point change in the yield on long gilts should translate into a one percentage point change in the dividend yield.[9]

Gilts have for many years offered a higher yield than have equities, but the solid line in Figure 3 shows that this gap between yields on gilts and equities narrowed between the beginning of the decade and summer 1998. Thus, while yields on equities fell, they declined less than the yield on gilts. This implies, that if the risk premium and expected nominal dividend growth have remained constant, then the fall in nominal interest rates was more than sufficient to explain the rise in equity prices in the UK during this eight-year period.[10]

We observed above that the dividend discount model holds in both nominal and real terms, so that the dividend yield is also equal to the difference between the real required rate of return and the expected real dividend growth. Hence it is also useful to look at the

Figure 3 Dividend yields and interest rates (1980 - 1998)



Source: DATASTREAM

gap between the yield on index-linked gilts and the yield on equities.

This is shown by the dotted line in Figure 3. The gap was roughly constant between 1994 and summer 1998, though it had edged upwards in the first years of the decade. In other words, it is not necessary to invoke a fall in the risk premium or an increase in the expected real rate of dividend growth to explain the decline in equity yields (or rise in prices) during this four-year period. The fall in real interest rates could explain just about the entire fall in yields.[11]

Explaining the level of equity yields

While the fall in long-term interest rates may go a long way towards explaining the rise in UK equity prices, that is a far cry from saying that prices in mid-1998 were at an equilibrium level. The difficulty here is that it is even harder to make judgements about the absolute level of prices than to assess whether prices today are justifiably higher than they were a year or so ago. Yet major market adjustments often occur when investors lose confidence in the basis for their valuations.

We have seen that, if dividends are expected to grow at a constant rate, then the dividend yield should equal the difference between the required return and the expected rate of dividend growth. We also noted above that the return that investors require has two components — the interest rate and the risk premium. The first is easy to observe; the second can only be estimated. Since we cannot observe either the risk premium or the expected dividend growth, we have shown in Table 1 a range of risk premia and growth rates that would be consistent with the prospective dividend yield in July 1998. We now proceed as follows. First we review the evidence on the risk premium. Then we look at possible measures of the prospective dividend growth and ask whether the level of equity yields in July 1998 was consistent with plausible combinations of risk premium and dividend growth.

The equity risk premium

The past history of equity returns is often used to estimate the risk premium, but, since equity prices are so variable, a large number of years is needed to obtain a reliable estimate. In the UK equity returns since 1919 have averaged

Table 1 Combinations of risk premia and expected dividend growth that are consistent with UK dividend yields in July 1998

Risk premium % *	Expected dividend growth %
0	2.8
4	6.7
5	7.6
6	8.6
7	9.7
8	10.6

* Measured relative to long-term interest rates

7.8 per cent above the yield on long-dated gilts.[12] Even with such a long data series, the standard error of this average is almost 2.7 percentage points. Thus we might say with reasonable confidence that the risk premium is within two standard errors or 5.4 percentage points on either side of the 7.8 per cent average, but clearly that leaves considerable room for dispute.

There are several possible reasons that the average of past equity returns may overstate the risk premium that investors expected. For example, part of the capital appreciation since 1919 in UK equities has come from a fall in dividend yields. Had the average annual capital appreciation simply matched the average growth in dividends, the realised risk premium would have been about 3 percentage points lower (i.e., 4.6 per cent).[13]

The need to employ a large number of years to estimate the risk premium may also bring with it some problems. In particular, the UK has been a relatively stable and successful economy and its equity market has provided relatively high returns. However, in some other countries war, revolution or major economic disruptions have led to stock market closures and made equities less attractive long-term holdings. Since there must have been some possibility that the UK could have experienced similar dislocations, past realised rates of return on UK equities are not necessarily typical of those that were expected in the past or that can be expected in the future.[14]

The UK has been a relatively stable and successful economy and its equity market has provided relatively high returns

Other economists have questioned whether equity investors can plausibly have demanded such a high compensation for risk as they have received. For example, Mehra and Prescott have argued that, if investors are very averse to risk, they might be expected to play safe by reducing consumption sharply whenever their wealth falls.[15] Since in practice consumption is remarkably steady, Mehra and Prescott conclude that investors cannot need the high risk premia that they have had the good fortune to receive. What is not clear is whether the explanation of this so-called "equity premium puzzle" is that the risk premium is indeed lower than past returns suggest or that the puzzle stems from an overly simplified model of individual behaviour.

A separate issue is whether the risk premium that investors require today is higher or lower than the

premium that they have required in the past. This could occur either because equity investment is less risky today or because investors are more willing to bear risk. The variability of equities clearly changes over time with bursts of unusual volatility followed by periods of relative calm. However, Figure 2 which plots volatility for the UK market index since 1973 provides no evidence of any long-term trend in volatility.

It is not easy to determine whether attitudes to risk have changed, though the long-term decline in dividend yields would at least be consistent with reduced risk aversion. For example, this could have occurred because investors have become better diversified both within a country (for example, through cheaper access to unit trusts) and across national boundaries. If this improved diversification has reduced portfolio risks, then investors are likely to tolerate a lower risk premium.

It is sometimes argued that investors' willingness to bear risk may change as prices change. For example, after a large fall in prices, investors may be less willing to invest in equities and consequently demand a very high risk premium. Demographic factors may also affect investors' willingness to bear risk. For example, it is often asserted that investors' risk aversion increases with age. If so, we would expect the market risk premium to be positively correlated with the age of the average investor.[16]

A recent survey of financial economists indicates that many believe that past realised rates of return overstate the returns that investors require. While their modal estimate of the risk premium over the long-term interest rate was about 8 per cent, the average of their estimates was 6 per cent.[17] Few respondents recommended a higher figure than 8 per cent and most suggested a figure of between 4 and 8 per cent. We will, therefore, use 4-8 per cent as a measure of the plausible range for the risk premium on UK equities.

So were equity prices clearly overpriced in July 1998 or was the subsequent decline simply a reaction to unforeseeable events?

The expected dividend growth

We can now turn back to Table 1 and consider the implications of the dividend yield and alternative estimates of the risk premium for the expected growth in dividends. It is obvious that the value chosen for the risk premium plays a critical role. For example, with a middle-of-the range value of 6 per cent for the equity risk premium, investors in July 1998 would have needed to foresee a dividend growth of 8.6 per cent, well above the historical growth rate of 6.4 per cent. But, using a slightly lower value for the risk premium, say 4 per cent, would produce a dividend growth rate of 6.7 per cent, which is much closer to the historical average. Put differently, if one were to use the historical dividend growth rate of 6.4 per cent, then equity prices in July 1998 would have implied a risk premium of 3.7 per cent, just outside the range of figures suggested by most financial economists.

There are other clues to the likely growth in dividends. Over the long term, growth in profits and dividends depends on the rate of new capital investment and the return that firms earn on this investment. Thus, if firms are simply expected to maintain their earnings

on existing assets, then we can use the following simple expression to estimate the expected dividend growth:

Expected dividend growth = (1 - payout rate) x expected return on new equity investment

Currently, UK firms plough back 43 per cent of their profits and earn a return of about 16 per cent on their equity investment.[18] If they continued to do this, earnings and dividends would grow by 43 x 16 = 6.9 per cent, a shade higher than the historical growth rate.[19]

Dividend growth of 6.9 per cent would be consistent with a risk premium of 4.2 per cent — just inside our measure of the plausible range for the risk premium.

Conclusion

So were equity prices clearly overpriced in July 1998 or was the subsequent decline simply a reaction to unforeseeable events? Notice first that most, if not all, of the rise in equity prices between 1994 and July 1998 could be explained by the fall in interest rates. So, if investors in summer 1998 were expecting unreasonably high rates of dividend growth (or if the equity risk premium was implausibly low), then this was a condition that had existed for several years. We have seen that price levels in July 1998 would have been justified if firms could be expected to maintain their return on new investments and the expected risk premium was 4.2 per cent. Such a risk premium is not implausible, but how confident could we be that it is correct? For example, suppose nothing else changed except that the premium was 6 per cent (remember that this was the average of the figures proposed in the survey of financial economists). In this case the constant-growth model would indicate that in July 1998 the gross dividend yield on equities should have been about 4.5 per cent.■

Notes

1 This article has benefited from valuable inputs from Simon Hayes and Prasanna Gai.
2 See G J Benston, R A Eisenbeis, P M Horvitz, E J Kane, and G G Kaufman, Perspectives on Safe and Sound Banking, Cambridge, Mass, MIT Press, 1986.
3 In this case the usual recommendation against shooting the messenger applies.
4 Source: ONS, Financial Statistics. Includes quoted ordinary shares, unquoted ordinary shares and preference shares.
5 UK equities account for about 52.8 per cent of total pension fund assets in the UK at end 1997. Source: The WM Company, UK Pension Funds Universe, Quarter 1, 1998.
6 See, for example, The Economist, April 18, 1998: "Pricking a financial bubble is a risky business, and it is better to act early to prevent one developing."
7 See, for example, N Jegadeesh, "Seasonality in stock price mean reversion: evidence from the USA and the UK," Journal of Finance, 46, 1427-1444 (1991).
8 Evidence for the UK is provided by W N Goetzmann and P Jorion, "A Longer Look at Dividend Yields," Journal of Business 68, 483-508 (1995), and R A Brealey and S Kwan, "Personal Taxes and the Time Variation of Stock Returns — Evidence from the UK," Journal of Banking and Finance, forthcoming.
9 The duration of equities is (1 + required return)/(required return — expected dividend growth), which is probably in excess of 15 years. Changes in the long-term interest rate are, therefore, likely to have a greater impact on the required return than changes in the short rate.
10 It is important here to bear in mind the limitations of the "constant dividend growth" assumption. For example, the rise in the real yield gap in the early 1990s might simply represent the (correct) perception by investors of a short-term cyclical increase in the rate of dividend growth rather than a change in perceived long-term growth rates.
11 In a similar analysis of Japanese stock prices during the 1980s, French and Poterba conclude that the decline in real Japanese interest rates was insufficient to account fully for the rise in stock prices. See K R French and J M Poterba, "Were Japanese Stock Prices Too High", Journal of Financial Economics, 29: 337-363 (1991).
12 This is an arithmetic average of the difference in returns. The arithmetic average is the appropriate measure to use when discounting. The risk premium is often expressed as a premium above the short-term interest rate. When expressed in this way, the premium is about 1 percentage point higher.
13 If this fall in yields occurred because investors require a lower risk premium than formerly, then even this adjusted figure would overstate the return that investors require today.
14 W. Goetzmann and P Jorion, "A Century of Global Stockmarkets," NBER Working Paper, January 1997.
15 R Mehra and E Prescott, "The Equity Premium: a Puzzle," Journal of Monetary Economics, 15: 145-161 (1985).
16 See, for example, G Bakshi and Chen, Z (1994) "Baby Boom, Population Ageing, and Capital Markets," Journal of Business, 67, pp. 165-202.
17 I Welch, "Views of Financial Economists on the Equity Premium and Other Issues," Working paper, Anderson Graduate School of Management, UCLA, April 1998. It is possible that some of the respondents believed that the questions in the survey referred to the geometric mean return, which understates the arithmetic mean.
18 This is an accounting rate of return. The possible biases in these accounting measures are well known.
19 The average of the past real rates of dividend growth has been about 1.9 per cent per year. Since investors appear to be anticipating an average future inflation rate of about 3 per cent per year, the 6.9 per cent nominal growth rate implies a rather more marked rise in the real growth rate.

A SINGLE REGULATOR FOR THE UK FINANCIAL SERVICES INDUSTRY

by Clive Briault, Financial Services Authority

In setting up a single financial services regulator the Government aims to create an effective regulatory regime based on a clear and robust structure within which a single statutory regulator has clearly defined regulatory objectives, a single set of coherent functions and powers, and the flexibility to take full account of the different regulatory approaches appropriate to different firms, markets and consumers, and to respond to rapid change in financial markets.

The Government announced in May last year its intention to reform the regulatory system for financial services. Following this, the Financial Services Authority (FSA) was launched in October last year, and the Bank of England Act transferred the prudential supervision of banks (and the Bank's regulatory regime for participants in the wholesale money, foreign exchange and bullion markets) to the FSA in June this year.

The next stage in this reform was publication by the Government at the end of July of a draft Financial Services and Markets Bill, which will give the FSA the powers to act as a single financial services regulator.[1] The draft Bill has been issued for public consultation. The Bill will then be introduced into Parliament; debated and scrutinised by Parliament; and, if passed by Parliament, will come into force as the Financial Services and Markets Act.

The new Act will replace provisions of the Insurance Companies Act 1982, the Financial Services Act 1986 and the Banking Act 1987, together with those parts of the Building Societies Act 1986 and the Friendly Societies Act 1992 which deal with the regulation of financial services business.

In taking these steps to create a single financial services regulator the Government has emphasised the importance of replacing the current costly, inefficient and confusing system with an effective regulatory regime based on a clear and robust structure within which a single statutory regulator has clearly defined regulatory objectives, a single set of coherent functions and powers, and the flexibility to take full account of the different regulatory approaches appropriate to different firms, markets and consumers, and to respond to rapid change in financial markets.

The newly–designed single framework should also generate benefits from:

- the harmonisation, consolidation and rationalisation of the principles, rules and guidance issued by the existing regulators or embedded within existing legislation, while recognising that what is appropriate for one type of business, market or customer may not be appropriate for another;
- a single process for the authorisation of firms and for the approval of some of their employees, using standard

In addition, the FSA will be granted additional powers and responsibilities under the new legislation to combat market abuse in relation to certain designated investment markets

processes and a single database;
- a more consistent and coherent approach to risk-based supervision across the financial services industry, enabling supervisory resources and the burdens placed on regulated firms to be allocated more effectively and efficiently on the basis of the risks facing consumers of financial services;
- a more consistent and coherent approach to enforcement and discipline, while recognising the need for appropriate differentiation;
- in addition to a single regulator, single schemes for handling consumer complaints and compensation, and a single independent appeals tribunal.

The draft Bill provides a broad framework which gives considerable discretion and flexibility to the FSA. This should allow regulation to adapt quickly to changing financial markets. But this also imposes a responsibility on the FSA to explain how this flexibility and discretion will be exercised in practice. So in August the FSA published a paper, "Meeting our Responsibilities", which set out how it intends to:

- meet its statutory objectives, as set out in the draft Bill, and to do so with due regard to the considerations listed in the draft Bill;
- use effectively and fairly the powers which the new legislation will grant to the FSA;
- operate as a single regulator, with a consistent — but not necessarily identical — approach to its functions across the financial services sector;
- develop its regulatory approach further through a series of consultations over the coming months.

Scope

The draft Bill brings together the different types of activity relating to deposit-taking, insurance and investments currently covered by the existing regulators. The Treasury, with Parliament's approval, will set out in secondary legislation exactly which activities will be covered, and the Treasury will subsequently be able to add (or remove) types of financial activity to (or from) the scope of the FSA's responsibilities.

The Government's current intention is that when the new legislation comes into force, the scope of the FSA's remit will be broadly the same as that of the existing regulators, but with additional responsibility for the external oversight of Lloyd's, including the regulation of managing agents and members' agents; the direct regulation of firms formerly authorised to conduct investment business by professional bodies such as the accounting bodies and the law societies; and the recognition of overseas exchanges and clearing houses in the UK.

In addition, the FSA will be granted additional powers and responsibilities under the new legislation to combat market abuse in relation to certain designated investment markets. It is proposed that the new market abuse regime should apply to conduct by any person, whether an individual or a corporate entity and whether regulated by the FSA or not.

Objectives

The draft Bill sets clear objectives for the FSA (see Box 1). In discharging its general functions the FSA will be required, so far as is reasonably possible, to act in a way which is compatible with the regulatory objectives and which the FSA considers most appropriate for the purposes of meeting these objectives.

Maintaining confidence in the UK financial system

This objective is shared between the FSA and the Bank of England, and can be delivered effectively only by close collaboration between them. The framework for collaboration is set out in the Memorandum of Understanding between the Treasury, the Bank and the FSA, which was published in October 1997. The Memorandum describes the different and interlocking responsibilities of the three organisations and establishes a Standing Committee to ensure that they work together effectively.

That Standing Committee is now in operation and considers emerging problems, whether in domestic or overseas markets, which could threaten the stability of the UK financial system. It provides a clear framework for assessing these risks and determining corrective action. Comprehensive information-sharing agreements between the FSA and the Bank have been put in place to ensure a free flow of relevant information between them.

Box 1 The FSA's statutory objectives

The draft Financial Services and Markets Bill states four regulatory objectives for the FSA:

- maintaining confidence in the financial system;
- promoting public understanding of the financial system, including promoting awareness of the benefits and risks associated with different kinds of investment or other financial dealing and the provision of appropriate information and advice;
- securing the appropriate degree of protection for consumers, having regard to the differing degrees of risk involved in different kinds of investment or other transaction, the differing degrees of experience and expertise which different consumers may have in relation to different kinds of regulated activity, and the general principle that consumers should take responsibility for their decisions;
- reducing the extent to which it is possible for a business carried on by a regulated person to be used for a purpose connected with financial crime, with particular regard to the desirability of regulated persons being aware of the risk of their businesses being used in connection with the commission of financial crime and taking adequate measures to prevent, facilitate the detection and monitor the incidence of financial crime.

In addition, in discharging its general functions, the FSA must have regard to:

- the need to use its resources in the most efficient and economic way;
- the responsibilities of those who manage the affairs of authorised persons;
- the principle that a burden or restriction that is placed on a person, or on the carrying on of a regulated activity, should be proportionate to the benefit intended to be conferred in general by the provision;
- the desirability of facilitating innovation in connection with regulated activities;
- the international character of financial services and markets and the desirability of maintaining the competitive position of the United Kingdom; and
- the principle that competition between authorised persons should not be impeded or distorted unnecessarily.

Promoting public understanding

For the first time in the UK, a financial regulator has been given a specific objective in the area of consumer education. Consumers need appropriate information on which to base their decisions, and the ability to understand that information. And transparency is essential for financial markets to work effectively.

Consumer protection

The prime responsibility for dealing fairly with customers rests with the management of the regulated firm. The FSA's regulatory approach will be designed to focus and reinforce that responsibility.

Also, wherever possible, the regulatory approach will focus on outputs, addressing directly the consequences for consumers of firms' behaviour. But it will often be necessary to focus as well on internal processes and on the selling or advisory activity itself, including the robustness of firms' systems for identifying, measuring and controlling risks both to the firm itself and to the customer.

However, as the terms of the statutory objective recognise, it is neither possible nor appropriate to offer complete protection to the customers of financial institutions, whether they are depositors, investors or policyholders. That applies, clearly, to sophisticated commercial customers. But no system of regulation can insulate even retail consumers from taking some responsibility for their own decisions on their savings and investments. This principle will be recognised both in the overall approach to regulation and in the arrangements adopted for depositor, policy-holder and investor compensation, where an element of "co-insurance" will be maintained.

Reducing financial crime

The FSA will integrate its financial regulation with the work of other criminal law intelligence, investigation and prosecution agencies. The prime focus will be to ensure that financial institutions have systems and practices in place to protect themselves against being used as vehicles by financial criminals, especially by way of money laundering.

In pursuing these four objectives the FSA will be required to have regard to the considerations listed in Box 1. In addition, the FSA will be subject to a number of accountability and governance requirements.

Efficiency and effectiveness

The FSA is funded mostly through fees levied on those it regulates. It will consult each year on its budget and proposed fees, and the non-executive members of the FSA board will have a particular responsibility (acting as a committee of non-executive directors) for keeping under review the efficient and economic operation of the FSA, overseeing its mechanisms of financial control and setting the remuneration of the executive members of the board. The board is appointed by the Treasury and the FSA will be accountable to Treasury Ministers and, through them, to Parliament. The new legislation will impose a duty on the FSA to report annually on the achievement of its statutory objectives to the Treasury, which will be required to lay the report before Parliament.

Within the FSA, the allocation of resources will be determined in part through a risk-based approach to supervision, with account taken of which firms and activities pose the greatest risk to consumers, and of which consumers are least well placed to protect their own interests.

Regulation also imposes costs on the financial services industry over and above the fees charged to individual firms. This is recognised in the requirement in the draft Bill for the FSA to publish cost-benefit analyses within its consultations on proposed rules. This will impose an important discipline on regulation and the FSA intends to make cost-benefit analysis an integral part of its standard-setting processes. The conclusions drawn from such analysis should help to ensure that an appropriate level of differentiation is incorporated within the FSA's regulatory standards and that the FSA takes due account of the "proportionality" consideration when framing its requirements.

The FSA plans to adopt an open and responsive approach and to go beyond the consultation requirements of the new legislation. In particular, the FSA will establish a consumer panel, with a broad brief to monitor the extent to which the FSA is fulfilling its statutory objectives in relation to consumers — their protection, and their understanding of the financial system. The panel will be free to publish its views on the work of the FSA and to commission research on consumers' views.

Similarly, the FSA will establish a practitioner forum, which will

be invited to comment publicly on the extent to which the FSA is meeting its statutory objectives and, in doing so, is having due regard to the considerations set out in the draft Bill. The practitioner forum is also likely to take a close interest in both the FSA's costs and the costs of regulation overall.

Responsibilities of the managers of regulated firms

The FSA's regulatory approach will aim to focus and reinforce the responsibility of the management of each regulated firm to deal fairly with customers and to ensure compliance with regulatory standards. The draft Bill makes provision for the FSA to issue statements of principle for approved persons and supporting codes of practice. These will enable the FSA to provide clear and specific standards which those who manage regulated firms will be expected to meet.

Innovation and competition

The FSA will seek to ensure that its rules and guidance — and the manner in which they are interpreted and implemented — do not impede or distort competition, in particular by taking account of the effect of its actions on the structure of financial institutions and markets and by seeking to ensure that consumers are properly informed when taking financial decisions.

Innovation and competition are usually in consumers' best interests. While there are no plans to extend product approval in the legislation, there is a need to ensure that the regulatory environment develops alongside the introduction of new products and markets. The FSA's rules and practices will be subject to competition scrutiny by the Director General of Fair Trading, who must report to the Treasury if he finds that any of those rules and practices have a significant anti-competitive effect.

The practitioner forum will be invited to comment on the extent to which the FSA's regulatory approach is facilitating, or constraining, innovation and competition in financial services; and the consumer panel will be invited to comment on the impact of competition and innovation on the interests of consumers.

International character of financial services and markets

London is a uniquely international centre for financial services. Much of the business undertaken in the UK is internationally mobile and almost all aspects of the FSA's responsibilities have an international dimension. One of the aims in introducing a new regulatory system built on a single, all encompassing, authority is to ensure that the UK's system of regulation remains attractive to mobile international firms and markets.

The FSA will play a full part in discussions in the appropriate international regulatory bodies, to ensure that the UK's influence on the development of international regulatory standards is commensurate with the weight of our markets in global terms. In many areas this

The FSA will have five main types of power to set standards of financial soundness, and business and market conduct

These standard-setting powers will enable the FSA to express its requirements clearly, but with the flexibility to accommodate innovation

work will proceed in partnership with the Treasury and the Bank of England.

Powers

The draft Bill also describes the framework of powers within which the FSA will operate. These include powers to make and amend rules and to issue guidance; to authorise firms and to approve those employees who perform particular roles; and, if necessary, to use formal powers of investigation, intervention, discipline and prosecution against those who fail to meet regulatory or statutory requirements in order to secure remedial action, to punish and deter and, where appropriate, to secure redress for consumers.

The FSA will have five main types of power to set standards of financial soundness, and business and market conduct (where applicable), for the financial services industry:

- to make rules applicable to regulated firms. In addition to setting detailed requirements, the FSA will use these powers to create a new set of FSA principles for businesses. These principles will be high-level precepts stating the fundamental obligations of regulated firms. A consultation paper on these principles was issued by the FSA in September;
- to state principles (but not other rules) applicable to approved persons employed by regulated firms. These principles, which will be supported by an evidential code of practice for approved persons (including senior managers), will be an important vehicle for stating the responsibilities of firms' senior managers under the regulatory system;
- to make "evidential" provisions, which will not impose obligations or carry sanctions in their own right, but which (like the Highway Code) will help to demonstrate observance or breach of binding requirements. These powers will be used to issue codes of conduct, such as the Code of Market Conduct, consultation on which is already underway, and the code of practice for approved persons;
- to endorse codes or standards issued by others, for example to complement the FSA's own rules and guidance or to avoid unnecessary duplication. The FSA will have the power to enforce such codes at the other's request;
- to issue guidance. This will include guidance on key standards in the new legislation, for example, what the FSA understands by "fit and proper", and other interpretations of the legislation and of the FSA's own requirements, including the FSA principles, and indications of routes to compliance and best practice.

These standard-setting powers will enable the FSA to express its

Box 2 The FSA's Authorisation and Enforcement Powers

The draft Financial Services and Markets Bill provides the FSA with a wide range of powers. These include:

Authorisation, approval and recognition

- to authorise persons carrying on a regulated activity in the UK and to specify the activities they are permitted to undertake. Some firms will be automatically authorised, for example European firms which have rights under European law to do business in the UK. Firms which are currently authorised by their existing regulators will be "grandfathered" — their current authorisation will continue — although the FSA could require some firms to re-apply;
- to withdraw authorisation from a firm which does not meet the fit and proper requirements;
- to recognise investment exchanges and clearing houses, including overseas exchanges and clearing houses wishing to operate in the UK, on the basis of criteria set by the Treasury;
- to approve individual employees of regulated firms, if these employees exercise a significant influence over how a firm's business is conducted, such as senior management, or deal directly with users of a firm's services, such as sales staff;
- to withdraw approval if an approved employee is no longer fit and proper;
- to prohibit or restrict an individual's employment in the financial services industry.

Investigation and intervention

- to require regulated firms, connected persons and exchanges and clearing houses to provide information, and any person to produce documents relevant to an investigation;
- to investigate the affairs, ownership or control of any regulated firm;
- to require a regulated firm to appoint auditors, accountants and other professionals to undertake investigations and to report on the firm's activities;
- to intervene by imposing specific requirements on regulated firms, or by directing recognised exchanges and clearing houses to comply with the recognition criteria.

Discipline, civil and criminal enforcement

- to impose fines and to issue statements of public censure against regulated firms and approved employees for breaches of rules and other misconduct;
- to impose a civil fine on any person (not just regulated firms and approved employees) for abusing confidential information or for misleading and market-distorting behaviour in markets designated by the Treasury;
- to require those who have breached principles, other rules or other requirements in the Bill to make restitution or pay compensation to their customers;
- to apply to the court to freeze the assets of a regulated firm, or of any person involved in market abuse;
- to seek an injunction from the court to prevent or stop regulated firms and approved employees from breaching principles, rules or other requirements under the Bill or engaging in market abuse;
- to prosecute insider dealing, market manipulation and money laundering offences;
- to prosecute unauthorised firms undertaking regulated activities.

requirements clearly, but with the flexibility to accommodate innovation. The exercise of these powers will be guided by the FSA's statutory objectives. The standards will be expressed in a way that supports the efforts of firms who regard meeting regulatory standards as a matter of substance, not mere form; who integrate compliance into their business strategies, management structures and commercial operations; and who actively address and manage their risks. This is consistent with the importance of senior management responsibility for meeting regulatory standards.

The transition to a single FSA

handbook of rules and guidance will take time. The FSA intends to make changes in a way which improves the effectiveness of the regulatory regime while causing a minimum of disruption to regulated firms, retaining those elements of the existing regime which work well and recognising the burden and risks of change for the industry (including the pressures on firms in preparing for the year 2000 and the introduction of the euro) and for consumers.

The FSA therefore intends to ensure that its regulatory requirements are:

Appropriate

Different types of consumer need different degrees of protection, and different types of market and firm require different degrees of regulation. Cost-benefit analysis will be used to assess whether the burdens imposed by FSA requirements are proportionate to the intended benefits.

Simple and clear

Requirements should be easily understood, and the interrelationships between principles, other rules, guidance and codes should be clear.

Coherent

Risks of a comparable kind, generating comparable risks for consumers or the financial system, should be treated in a similar way wherever they arise. There will be opportunities to harmonise, consolidate and rationalise the various principles, rules and guidance issued by the existing regulators or contained within existing regulatory material.

Flexible

Regulation should be able to react promptly to changing market circumstances and should not unreasonably constrain innovation in financial markets.

Regulation

The FSA's approach to the supervision of those it regulates will be to apply these principles, other rules, codes and guidance flexibly by tailoring the general requirements to fit the circumstances of particular firms. This will generally be achieved through the informal exercise of regulatory judgement and through good relations with firms, building on the traditions and techniques of the existing regulators.

The FSA will seek to apply consistent standards

More generally, the FSA will develop an open and transparent approach to supervision, to encourage firms to co-operate with the FSA and to enable them to pursue their commercial strategies within a predictable regulatory environment. The FSA will look to the senior management of firms to ensure that businesses are run in a sound and prudent manner, and in compliance with statutory and regulatory requirements. Where firms or individuals fall short of regulatory expectations, senior management will be expected to put their own house in order, and to deal fairly with investors, depositors and policy-holders who have been disadvantaged as a result.

The FSA will seek to achieve this wherever possible through persuasion and dialogue. But it will use its statutory powers where necessary to ensure that appropriate remedial action is taken and redress provided.

The standards set by the FSA will also underpin the use of the authorisation and enforcement powers set out in the draft Bill, a selection of which are listed in Box 2. In general, these powers are equivalent to those of the existing regulatory bodies, although the FSA will also be given new powers — mostly in the area of market abuse and in reducing financial crime.

In exercising these powers the FSA will seek to apply consistent standards across the financial services industry, but will have the flexibility to take due regard of the circumstances of the firm or individual concerned and of the seriousness of any breach of regulatory or statutory requirements.

Appeals

The draft Bill provides for a formal, independent mechanism for firms or individuals seeking review of a decision or action taken by the FSA. A new independent Appeals Tribunal will be established and managed as part of the Court Service. The Tribunal will hear appeals against regulatory decisions by the FSA which affect regulated firms and approved employees (such as the refusal of applications for authorisation and approval, or the use of intervention or discipline powers) and also hear appeals against FSA orders requiring firms or market abusers to pay fines, hand back profits or make compensation.

The Tribunal will have power to reconsider all issues of fact and law, and to substitute its own decision for that of the FSA. Appeal from the decisions of the Tribunal will be on points of law only and, at the instance of either the FSA or the person subject to sanctions, will be heard by the appropriate Court in England and Wales, Scotland or Northern Ireland.

In addition, the FSA has appointed an independent Complaints Commissioner to investigate formal complaints against the Authority made on or after 1 June 1998. Having investigated a complaint, the Commissioner will inform the complainant and the FSA of his findings and may make recommendations to the management of the FSA with a view to remedying any matters disclosed in his investigation. The Commissioner will publish an annual report on his work.

Consumer complaints and compensation

Effective arrangements for dealing with consumer complaints and for compensating consumers when a regulated firm is no longer able to meet its liabilities are a key element in the provision of effective protection for consumers of financial services. Where a consumer complains about the service or treatment received from a regulated firm, it will be for that firm in the first instance to attempt to resolve the complaint. Firms should have effective arrangements for handling complaints. But not all complaints will be capable of resolution in this way. The Government has therefore decided that there should be an independent complaints-handling scheme to deal with complaints which firms are unable to resolve to their customers' satisfaction. This will be a single, unified ombudsman scheme. The Financial Services Ombudsman scheme will be independent from the FSA. The scheme should be able to resolve disputes between firms and their customers quickly and with minimum formality.

The scheme will be funded by the industry and it will make its own procedural rules. The Ombudsman will be able to decide in favour of a person who complains about a firm, if the firm has breached that person's legal rights or if the firm has acted unfairly or unreasonably. The Ombudsman can award compensation or order the firm to take some other corrective action. Authorised persons will be bound to co-operate with the scheme and comply with its decisions and the FSA could discipline a firm if it failed to comply.

The reform of financial services regulation also provides an opportunity to review the existing compensation and default protection schemes covering those financial service activities which will fall within the FSA's scope. The Government has decided that there would be clear operational advantages in bringing these various arrangements together. The draft Bill therefore proposes a single compensation scheme — the Financial Services and Markets Compensation Scheme (FSMCS).

The new scheme will focus on those consumers who are least able to sustain financial loss; it will provide substantial, but not in all cases complete, cover for the loss incurred; and it will be paid for by regulated firms, recognising that firms generally pass such costs on to their customers and that it is important to minimise the incidence of cross-subsidy in the funding arrangements.■

Notes

1 This article is not intended to provide a definitive or comprehensive account of the draft Bill or of the Government's proposals more generally. Copies of the Bill and of the accompanying consultation document are available from the Treasury's website.

PAYMENT SYSTEMS IN GLOBAL PERSPECTIVE: SOME VIEWS FROM THE CENTRAL BANK

by David Sheppard, Bank of England

Central Bank Governors' Symposium, Bank of England, 5 June 1998

Payment and settlement systems represent the "financial plumbing" of an economy. And like plumbing, they are noticed only when they go wrong. But the flows in many payment systems, especially wholesale systems, are so large that any problems could cause serious disruption to business and transmit financial instability. Central banks have therefore, for many years, been interested in the detail of the operation of payment systems and indeed are often the system operator themselves. But, increasingly, commercial firms have become aware of the risk and efficiency issues. So payment and settlement questions have emerged from the back-office into the boardroom. This is particularly the case with foreign exchange settlement questions which are discussed on page 31 of this review.

Similarly, in central banks, it is not just the technicians who need to understand the issues raised in the design and management of payment systems. Governors themselves need to understand the policy questions and to oversee the central bank's payments strategy. The central bank governors who meet each year at the Bank decided this year to have an extended discussion of payment and settlement questions considering both the risk perspective and also the potential of payment systems to improve economic efficiency and contribute to economic management. On the specific questions of system design and configuration, there are some interesting and potentially difficult choices to be made. The trade-offs faced and the right choice will depend, for example, on a country's economic and financial development. The discussion at the central bank governors' seminar, summarised below, went into many of these issues.

The payment system development process

Introducing the first theme of why central bank governors should be interested, **Mr Trundle (Payment & Settlement Policy Division, Bank of England)** highlighted the fact that payment and settlement arrangements impinge directly on a central bank's key objectives of maintaining monetary and financial stability. Well-designed payment systems will both help in supporting the economy (in particular enabling monetary policy to be implemented effectively) and also contain the transmission of financial shocks and disturbances through the economy. Poorly designed systems could have the opposite effects — undermining economic efficiency and transmitting or even amplifying economic shocks. Although central banks share these underlying interests in how payment and settlement systems operate, the extent of individual central bank involvement in their operation will differ. The role of settlement agent to the payment systems, however, is a universal one, from which historically the central bank's functions as ultimate provider of overnight credit (and thereby the setter of interest rates) and as lender of last resort have developed.

A central bank's twin objectives in promoting and developing a country's payment and settlement

systems are risk reduction and promoting efficiency.

Although much emphasis is rightly placed on the reduction of risk, especially systemic risk, the promotion of efficient payment systems is important both in its own right and also because there is a need to secure a balance between efficiency and risk reduction that is acceptable to those who use the systems.

Achieving such a balance during a programme of payment system reform and development requires the involvement and co-operation of the participants, particularly so for projects and initiatives with an international dimension. Central banks had been very active both in developing and promoting these international understandings and principles.

Professor Fry (Centre for Central Banking Studies, Bank of England) went on to describe a five-stage model of payment system development. The five stages are:

(i) the cash economy;

(ii) a cash circuit for consumers and a paper-based non-cash circuit for enterprises operating informally without any clearing arrangements and with long lags between sending and receipt of payment;

(iii) non-automated clearing of non-cash payments with net obligations settled at the end-of-day ("deferred net settlement", or DNS), but with no protection against possible settlement failure (ie unlimited intra-day exposures between participants);

(iv) fully automated but "unprotected" payment systems, mainly DNS but also "real time gross settlement" (RTGS) systems in which payments are settled individually across participants' settlement accounts but with the central bank providing unlimited and unsecured intra-day credit on those accounts;

(v) fully automated and protected RTGS and/or DNS systems.

Various risks were identified which were relevant in analysing these stages — they could be grouped under the four broad headings of legal, operational, security and economic risk. At different stages, the relative importance of the different categories of risk would vary. In the final stage of fully-protected systems, there will be a tendency for some equalisation of the relative importance of these different risks.

Responding to this analysis, **Dr Kokoszczynski (Deputy President, National Bank of Poland)** highlighted some of the particular issues and problems faced by the transitional economies when developing their payment systems. One particular problem has been the telescoping of timeframes: new payment arrangements have had to be implemented quickly to serve the newly-liberalised economies. The risk versus efficiency trade-off is also less straightforward — for example, while it was clearly desirable to reduce the substantial amount of central bank "credit float" in the Polish payment system (ie the contractionary effect on commercial banks' reserves arising purely from a lag between the debiting of the sending bank's settlement account and the related crediting of the receiving bank), attempts to do so too quickly could have had adverse monetary implications. Deficiencies, both in the structure of the banking system and in the technical infrastructure, have created additional problems for the central banks in the transitional economies.

Dr Rashidi (Governor, Bank of Tanzania) went on to describe how Tanzania plans to move from stage (iii) of payment system development to stage (v). As part of this process, major changes to the legal framework supporting the payment systems will be necessary. To ensure the involvement of payment system participants and users, a national payment system advisory council has been established.

Speakers for a number of countries expressed their wish to move speedily and directly from stage (iii) to stage (v) development, but identified a variety of issues which they thought would tend to delay and/or complicate the process.

There was a perception amongst some countries that the development costs for RTGS would exceed those for fully-protected DNS, and that this could lead them to follow the latter route; however,

as was later pointed out, the technical requirements and costs of both are very similar. The availability of sufficient human and technical resources could well be a constraining factor, and might lead to a position where smaller, less technically-equipped banks lose their position as direct payment system participants. In addition and most immediately, technical resources would be needed for Year 2000 preparations and would therefore not be available for payment system development. Another major obstacle identified was a possible reluctance on the part of commercial banks either to recognise the risks inherent in unprotected, stage (iii)-type payment arrangements or to accept that such risks had to be addressed. This obstacle emphasised how important it is to secure the necessary "buying in" to the reform process by the commercial banks. In many instances, the supporting legal framework would also need to be developed; otherwise it could undermine the very risk reduction features that the development process was seeking to establish. A country's payment system development plans may need to take into account the regional context within which its economy operates.

The provision of intraday liquidity in large-value payment systems

Professor Fry introduced the second main theme of the symposium. The starting point for any discussion of this issue has to be the fact that, given a single set of payments to be processed and settled in a timely and efficient manner, the same amount of intra-day liquidity will need to be provided, whether the payments pass through a DNS system or through an RTGS system; the difference will be in the type of intra-day liquidity provided and who then bears the risk of its provision. Thus, in a DNS system, the liquidity is provided implicitly between pairs of banks (the receiving bank effectively provides free credit to the sending bank), whereas in an RTGS system any liquidity is explicitly provided by the central bank. In both protected DNS and RTGS systems, settlement risk is borne by the banks themselves, either on a "defaulter pays" basis (in RTGS where banks provide collateral to cover the central bank's exposure; and less commonly in DNS systems) or on a "survivor pays" basis (in DNS systems, where typically banks post collateral sufficient to cover at least the failure of the bank with the largest net settlement obligation).

In recent years, central banks have generally — but not universally — been moving from (protected) DNS to RTGS for their large-value payment systems. The explicit provision of intra-day liquidity in RTGS arrangements has concentrated attention on the trade-off between cost/efficiency and risk. Basic economic analysis/theory can be applied to the problem of how central banks can counteract commercial bank reluctance to use liquidity-intensive RTGS systems. Social welfare is maximised when social and private costs are equated. The optimum quantity of money theory suggests that because the marginal social cost of increasing the real quantity of liquidity is zero, then social welfare is maximised when the marginal private cost is also zero — ie the optimal arrangement is to eliminate liquidity constraints through central bank provision of an elastic supply of liquidity. The situation in the UK, where the member banks of the CHAPS system use part of the stock of liquid assets that they already hold for prudential purposes for intra-day repo purposes within RTGS, very much replicates such an arrangement.

Formally responding to this analysis, **Mr Thiessen (Governor, Bank of Canada)** explained how in his country the decision had been taken to develop a new, protected DNS system rather than RTGS. The deciding factor in this decision had been the likely cost of RTGS to the participating banks in terms of settlement balances or collateral to support the use of intra-day credit. He stressed that, given its particular risk management features, the system would be RTGS-equivalent for both participants and end-users. The system, which exceeds the international minimum standards for netting arrangements, will permit the use of intra-day credit

Reducing foreign exchange settlement risk

In July 1998 the G10 central banks published a report on progress by the private sector in reducing the risks involved in settling foreign exchange. An earlier report by G10 central banks had identified the extent of these risks, in terms of both the size and the duration of market participants' settlement exposures. Given the size of foreign exchange market turnover worldwide (some $1.5 trillion daily according to the latest BIS survey), the findings gave rise to concerns for financial stability. This earlier report, "Settlement Risk in Foreign Exchange Transactions" which was published in March 1996, also set out a strategy to reduce these risks. The emphasis was on action by the private sector, with active support from the public sector. Central banks expected progress within two years and have monitored developments closely.

The latest report concludes that progress has been significant, but momentum must be maintained. Central banks are reaffirming the importance of the issue and have strengthened the strategy. The report discusses:

(i) action by individual banks to measure and manage their settlement exposures; and

(ii) action by banking industry groups to provide risk-reducing multi-currency services.

Individual banks have made significant progress over the past two years: 96 per cent of major market participants directly surveyed have established senior level responsibility for managing the risk and, for control purposes, 73 per cent of the same population now treat foreign exchange settlement exposures as the equivalent of other credit exposures of the same size and duration.

In general, these major banks show much increased awareness of the issues and a number of them are devoting significant resources to programmes of action. Such developments are encouraging, but there remains considerable scope for improvement both in measuring exposures (60 per cent of the survey population do not yet do this properly) and in further reducing exposures by improving current settlement practices and by increasing use of bilateral and multilateral obligation netting. Among banks with smaller foreign exchange operations, and banks outside those centres primarily concerned with the initiative, awareness of the issue may be lower, and less effort may have been made to contain these risks.

To encourage further action by individual banks, the G10 central bank governors have invited the Basle Committee on Banking Supervision to develop international supervisory guidance for banks on the prudential management and control of foreign exchange settlement risk, in line with the recommendations of the 1996 report. National supervisors in each G10 country have already been involved, to varying degrees, in the implementation of the strategy, but international guidance will help to provide a common approach that can be applied to all banks, large and small and in all markets. This common approach will encourage attention to the issue worldwide.

The recent report also reviewed the progress of banking industry groups, where there are a number of encouraging initiatives. One of these is the plans by CLS Services Ltd to develop "continuous linked settlement" services to settle foreign exchange deals, through a Continuous Linked Settlement Bank. Another development has been the merger of this company with the two existing foreign exchange clearing houses, ECHO and Multinet. The merger has been welcomed widely by market participants. It creates greater certainty about the future shape of risk-reducing multi-currency services and encourages their use. In addition, there is now more extensive use of bilateral netting services (FXNET, Valunet and SWIFT Accord), as well as of bilateral arrangements based on standard industry contracts. Other industry groups have also been exploring alternative solutions to the problem, such as the possibility of replacing a part of the traditional market in foreign exchange with contracts for difference. To take forward this element of the strategy involving collective action, central banks will continue to co-operate with existing and prospective private sector groups planning to provide risk-reducing multi-currency services.

The third element of the strategy remains for G10 central banks to publicise the issue and press all involved to work to reduce foreign exchange settlement risk worldwide. We will therefore continue to assess progress in implementing the strategy until we are satisfied that these potentially large risks to financial stability have been addressed adequately.

through a 'survivor pays' as well as a 'defaulter pays' facility. These loss-sharing arrangements provide limits to the use of intra-day credit by each participant, are fully collateralised by the private sector participants to cover the losses associated with the failure of any single participant, and will be backed up by a formal and legally-binding central bank guarantee to cover the losses arising from multiple, unanticipated, intra-day failures of participants.

This insurance against a very unlikely catastrophic event (plus the necessary statutory support for the netting process) ensures that the participants will, in all circumstances, receive good funds in the end-of-day settlement. This enables them to provide their customers with intra-day finality.

Whilst the approach adopted by the Bank of Canada is unique amongst the developed market economies, and was therefore of interest to a number of the central banks present who were in the course of developing their own RTGS systems, **Mr Trundle** concluded that the differences between properly protected guaranteed DNS and RTGS systems were quite small. Under both types of system the underlying liquidity needs and risks are the same; and, technically, both types of system involve real-time monitoring and management of payment flows, so computing requirements are likely to be very similar. The difference lies in who bears the risk and the amounts of collateral needed: in RTGS a participant only pays out if it defaults, in a DNS system the emphasis on mutual insurance (loss-sharing) rather than on full collateralisation means that an individual bank is more likely to have to pay out in the event of a failure. Canada's LVTS combines both approaches to risk-bearing and collateral provision. DNS systems also needed to ensure that the legal basis of the netting is beyond doubt, as well as guarding against tendencies, founded on the mutual insurance provisions, to develop into a cartel.

As to whether DNS and RTGS systems could connect together internationally — for example, in the context of providing a "payment versus payment" mechanism for the settlement of foreign exchange transactions — there is no technical reason why not, provided the DNS payment legs were judged to be acceptable to all the participants in that particular scheme. Indeed, the Canadian dollar (settling on a DNS basis) is one of the currencies included in the current "continuous linked settlement" project designed to reduce risk in forex settlement.

Conclusion

In their concluding remarks, **Mr Trundle** and **Professor Fry** both referred back to the theme of co-operation and agreement in the payment system development process; this had been raised on a number of occasions throughout the symposium. The issue was not addressed explicitly in the CCBS research exercise, but was raised in the survey. From the results, it is evident that the degree of co-operation, between central bank and commercial banks, and amongst commercial banks themselves, has been less well-developed in the transitional economies in particular, possibly reflecting a degree of suspicion and lack of information on the part of the new commercial banking sectors, which left the central banks to assume much of the leadership role in payment system development. (This is also supported by the survey's figures on central bank operational involvement in the payment systems.) Co-operation must be nurtured as and when conditions allow, to achieve the commitment and "buying in" necessary to the successful development of fully-protected, "stage (v)" payment systems.

The discussions on the issue of intra-day liquidity and "DNS versus RTGS" had in fact emphasised the similarities in approach when the risks were properly addressed; they illustrated the point that all central banks can agree on the underlying analysis, and the core principles to follow in pursuing the twin objectives of risk reduction and efficiency promotion in payment systems. Such agreement enables substantial progress to be made internationally towards these objectives, with the differences only in the detailed implementation at national level.■

MUTUALS IN THE FINANCIAL SYSTEM

by Leigh Drake and David T Llewellyn, Loughborough University

This paper sets out a positive case for mutuals in the financial sector. It is an alternative view to that recently put forward in *Financial Stability Review* by Boxall and Gallagher (1997). Although our article is in response to this first paper, it is not designed to be a point-by-point rebuttal. Rather, we seek to present an alternative, but defensible, viewpoint. Our objective is not to make a case for one form of corporate structure over another. Rather, it is to emphasise that there are good reasons why different corporate forms co-exist within the same market-place and why there is an advantage in such a diversity of corporate form. It also considers why there is an economic rationale for the predominance of certain corporate forms, such as mutuals, in cases where institutions are relatively narrowly focused on providing long-term financial products such as mortgages and life assurance.

The mutual corporate form is common in financial services but much less so in non-financial business areas. Mutual institutions have often dominated housing finance and life assurance markets, both in the UK and in many other developed economies. In other words, the mutual form is not an aberration. In practice, mutuals tend to be more specialised (concentrating on retail services) in their business operations than their plc competitors, and this is frequently dictated by regulation rather than being an inherent characteristic of mutuality.

Although some protagonists in the debate about mutuality focus on the objectives mutuals should adopt, we choose to focus on issues such as efficiency, whether mutuals add value, and whether there is a systemic interest in having mutuals competing alongside plcs. Our overall perspective is that there is no presumption that the plc is a superior form of organising the economic firm and, even if there were such a presumption, it does not follow that there would be an advantage in all firms being structured in the same way. The issue of having a financial system populated by a diversity of organisational forms may be just as significant as the merits and drawbacks of each particular form of organisation.

Mutuals *v* plcs

Our starting point is that mutuals are economic firms, ie organisations which use resources to add value in the creation of goods and services. In this regard a mutual is one amongst many types of economic firm: sole proprietors, closed companies, partnerships, plcs, co-operatives, state-owned agencies etc. Different types of firm often compete with each other in the same markets. Mutuals are, therefore, one of many forms for organising economic activity. Each type of economic firm has its own advantages and disadvantages and strengths and weaknesses, which is why different organisational forms are able to co-exist, and sometimes in direct competition with each other.

In some senses mutuality is a natural form in some areas of finance most especially where long-term relationships are involved. The past and continuing success of large mutuals both in finance (eg building

societies and life assurance offices) and in other areas (eg the Automobile Association) also indicates that size is not in itself a significant factor. There is no reason why being a large organisation undermines mutuality. The success of the John Lewis Partnership in retailing, for instance, also indicates that large successful firms need not be conventional plcs.

Firms of any kind exist as a means of organising economic activity and adding value in the economic system. A firm, in say the manufacturing sector, needs an initial input of capital before it can proceed: initially this capital must be supplied externally. This is because the firm's suppliers and customers are not its owners. The firm needs financial resources to buy the inputs that are needed in the manufacturing process. However, there are two fundamental differences between firms in the manufacturing sector of the economy and those firms which provide financial intermediation services:

(1) one of the major inputs of the financial intermediary is money which is the same commodity that companies require as capital;
(2) in the case of the financial intermediary, its customers provide money and stand at both ends of the value chain: customers provide the basic input but also demand the service being supplied.

A mutual has no externally held risk capital — its capital is built up from accumulated profits

Put another way, the key difference is that in mutuals the customers are themselves the owners of the firm whereas there is a separation of the two in the plc.

A special characteristic of a building society (or bank) is that the deposits placed with them constitute the major economic input. Thus in their financial intermediation business, banks and building societies use real resources (employees, buildings etc) to transform the deposits or savings of one group of customers into loans for others. This is not a costless activity and the cost of the business is reflected in the interest margin (ie the difference between the interest rate paid on deposits and the interest rate charged on loans). The size of this margin is the crucial determinant of the price-competitiveness of a financial institution. Other things being equal, the more efficient is the institution, the narrower the margin can be implying either a lower loan rate and/or higher deposit rate.

It is, therefore, of some significance to identify the factors that determine the size of this margin. The major determinants are: management costs; risk premia on loan interest rates; the requirement to add to reserves if the institution is expanding and, for a plc, the cost of servicing capital. It is the last mentioned that is crucial in the distinction between mutuals and plcs.

A major difference relates to capital structure: (1) a mutual has

no externally-held risk capital (its capital is built up from accumulated profits); (2) there are no specialist outside risk-takers which supply equity capital; and (3) leaving aside subordinated debt, the only source of capital for a mutual is the profits of the organisation. Several implications follow from this:

- with a mutual, all profits are taken into reserves and add to the capital base, whereas a plc distributes a proportion of profits to external shareholders;
- the cost of capital to a plc is a claim on revenue and is exogenously determined in the capital market;
- as capital is internal to a mutual it is a source of profits as opposed to something that needs to be serviced in the case of a plc;
- as the capital of a plc is tradable, there is an active secondary market in ownership claims which does not exist with a mutual.

Our starting point is that, in the case of life assurance and financial intermediaries such as building societies, there is no *necessity* to have a specialist supplier of risk/equity capital independently of the customers. It can be argued that, if external suppliers of capital (shareholders in the case of plcs) are not *necessary*, having them stand between the two sets of customers unnecessarily increases the number of stakeholders in the firm. It may also add to the complexity of agency relationships, may create potential (and unnecessary) conflicts between customers and shareholders, and raise the cost of financial intermediation. This last-mentioned arises because there is a class of stakeholders which needs to be separately and explicitly remunerated but which is not *necessary* for the basic function of the firm (financial intermediation) to take place. In which case the issue arises as to what precisely external shareholders add to the value-creation within a firm. The external shareholder is a claim on the value-added created by the firm, and this can be justified to the extent that the existence of external shareholders enhances the value added by the firm, ie raises the efficiency of the process.

It may create potential conflicts between customers and shareholders, and raise the cost of financial intermediation

It is for these reasons that the mutual is a common organisational form for financial intermediaries, and why it exists in many countries. In fact, it could be regarded as a natural organisational form. The basic advantage of the mutual firm is that it offers a unique form of financial contract to its suppliers of funds which is a mix of debt and equity. This necessarily removes the potential conflict between shareholder and customer.

A major issue is whether *external* capital and *external* ownership adds to the efficiency of the firm in any fundamental way. Care is needed when making the common assumption that the additional claim of an external shareholder *necessarily* reduces the benefit of the other stakeholders.

This is because, if the total value added is enhanced in the process, all stakeholders may gain because of the increased efficiency of the firm. This is the key issue: claims on the value added may not be additive within a given total. There are two contrasting views about this:

(1) the existence of external shareholders adds nothing to the value creation of the firm but simply increases costs and adds an additional claimant on the value added;

(2) the existence of external shareholders increases the efficiency of the firm because they solve agency and accountability problems more effectively and efficiently, and because the market in corporate control with plcs (the takeover market) is a spur to efficiency.

Alternative views

Boxall and Gallagher (1997) in their analysis of mutuality elect to use the model of a profit-maximising firm as "the obvious standard of comparison for an economist" (p2). They do, however, recognise the important issue of agency problems, and hence the contribution of the literature on the managerial theories of the firm, (Baumol, 1959; Cyert and March, 1963; and Williamson, 1964) with its emphasis on managerial objectives such as growth maximisation and expense-preference behaviour. Boxall and Gallagher (1997) do not, however, consider a more recent development in the literature of the theory of the firm which rejects the classical model of the profit maximising firm in favour of models which emphasise classical forms of maximising behaviour on the part of the various agents which make up the firm (Alchian and Dempsetz, 1972; Jensen and Meckling, 1976; Fama, 1980; and Fama and Jensen, 1983). Because of the emphasis on the importance of rights established by contracts within an organisation, this literature is often described under the rubric "property rights".

Within the so-called "nexus of contracts" paradigm established under the property rights literature, any firm is simply a set of contracts among the various factors of production, agents or "stakeholders" within the organisation. Clearly, within this paradigm there are many alternative ways in which these sets of contracts can be structured and the mutual form is simply one amongst many possible corporate forms.

Since external suppliers of capital to plc institutions need to be remunerated (in the form of a required rate of return on equity), the absence of external shareholders in mutuals can be deemed to be an inherent efficiency advantage in the sense that, other things being equal, they should be able to operate on lower margins in respect of the financial intermediation process. Miles (1991), for example, has suggested that this inherent efficiency advantage amounts to a potential reduction in the margin between deposit and lending rates of at least 0.42 per cent for UK building societies, although more recent estimates suggest that this figure may be as high as 0.75 per cent. If building societies have an inherent "efficiency advantage", this can be used in one of two ways: (1) pricing at the level of plc competitors and thereby increasing contributions to reserves, or (2) undercutting plc competitors and raising their market share.

An irony of the former strategy (the one pursued by building societies in the late 1980s and early 1990s) is that it increases the incentive for members to advocate conversion as the value of their implicit ownership stake is increased. In other words, there is a greater likelihood that they will seek to unlock their ownership stake as its value increases. It is interesting to note in this respect, and as emphasised by Kay (1991), that mutual institutions become particularly vulnerable when they are either too profitable or inadequately profitable. The latter problem arises from a mutual's lack of access to external capital and the resulting link between asset growth and the generation of capital via the rate of return on assets.

With respect to the second strategy, some UK building societies have recently been instigating reductions in their margins in the mortgage and deposit markets precisely to demonstrate the alleged benefits of mutuality to their customers. An alternative strategy adopted by some building societies

is to demonstrate the virtues of mutuality by paying their members an annual "mutual dividend" — a bonus payment paid out of net profits which would otherwise be added to reserves. The success of these strategies is evident from the significant increase in market share in the mortgage market which the remaining mutuals have achieved (largely at the expense of the so-called "plc mortgage banks") since they began aggressively to cut interest margins from early 1996. The issue of the sustainability of this margin advantage is discussed more fully in a later section.

It can also be argued that mutual financial institutions are better able to address agency problems than their non-financial counterparts. This advantage relates to the unique nature of the residual claims in mutuals. Specifically, that they are redeemable on demand, ie, building society shareholders (investors) can simply withdraw their deposits. Fama and Jensen (1983), for example, point out that: "The decision of the claim holder to withdraw resources is a form of partial takeover or liquidation which deprives management of control over assets." On the other hand, if equity-holders in a plc sell their ownership stake on the stock market, this does not remove assets from the control of the management of the company.

In practice, as potential depositor/member withdrawals imply a partial liquidation in a mutual organisation, this should generate a strong incentive to supply financial services on competitive terms and to provide a high quality of service (especially in a highly competitive market environment). In this context the argument can be seen as an extension of the *exit-voice* dichotomy. In mutual organisations, depositors/owners typically exhibit little member voice but can exercise the easy and costless option of *exit*. In other words, it is easier and less costly for a member of a mutual simply to (almost costlessly) withdraw business (eg a deposit) and transfer it to a competitor than to seek to change the behaviour of the firm. This is a powerful discipline.

In the final analysis it is competition, and the low exit costs of members of mutuals, that is a major discipline

In the final analysis it is competition, and the low exit costs of depositor-members of mutuals, that is the major discipline on the mutual. If owners are dissatisfied they are able to withdraw their shareholding and, unlike the plc case, this also reduces the capacity and overall size of the mutual.

The inherent efficiency advantage of mutual financial institutions explains why they have been able to compete very effectively with plc institutions over a very long period of time, and in many countries. Indeed, it can be argued that the presence of external shareholders in plc financial institutions may add a further dimension to the agency problem by virtue of the potential conflict between the owners (equity shareholders) and depositors/customers.

For example, equity shareholders may prefer a higher risk profile for the institution than would depositors because of the former's limited liability. This implies that shareholders can benefit from potentially significant "upside gains" while being exposed to only limited downside potential. In contrast, depositors do not share this upside potential and would implicitly be subject to greater risk, given the limited scope of deposit insurance. Clearly, in financial mutuals this particular aspect of the agency problem (asset substitutions) is absent as owners and customers are one and the same.

Moreover, it can be argued that, while mutuals have an inherent effi-

The more ambitious their long-term expansion plans (in terms of size, diversity and risk) the more likely they will be to convert

ciency advantage in respect of financial intermediation, they have a particular advantage when long-term customer relationships are involved rather than "spot" transactions. Kay (1991), for example, argues that: "The special value of mutuality rests in its capacity to establish and sustain relational contract structures. These are exemplified in the most successful mutual organisations, which have built a culture and an ethos among their employees and customers, which even the best of plc structures find difficult to emulate."

Finally, it is also interesting to note that mutual financial institutions tend to be highly specialised and relatively low-risk institutions, with the mortgage and life assurance markets providing prime examples. It is also apparent that the waves of de-mutualisation which have occurred in the Anglo-Saxon economies have generally tended to follow periods of specific deregulation where mutuals have been permitted to diversify their range of activities, including the possibility to engage in higher risk activities. Indeed, the conversion option has often been introduced at the time of deregulation, as in the case of the 1986 Building Societies Act. While it is clear that mutual financial institutions, such as UK building societies, have traditionally been narrowly focused and relatively low-risk institutions as a direct result of restrictive regulation, it is also likely that financial mutuals would tend to adopt this profile even in the absence of such regulation. With respect to risk, this reflects the fundamental characteristic of mutuals, specifically their lack of access to significant external sources of capital via specialist risk takers. In this context, there are two key aspects to this fundamental characteristic of mutuals. Firstly, the knowledge that capital cannot easily be replaced following the generation of significant losses would be likely to induce the managers of mutual financial institutions to adopt a relatively low risk profile. Secondly, the fact that the owners of a mutual institution, unlike the owners of a plc, are not specialist providers of risk capital.

Hence, it might be argued that it would be inappropriate for mutual financial institutions, such as building societies and life companies, to diversify too far into higher risk business. We do not, however, support the common assertion that mutuality is inappropriate for a large organisation. In our analysis, risk is the key issue and size is relevant only to the extent that larger financial institutions tend to be more diversified and have a higher-risk profile. In our view this size-risk causality, although common, is by no means inevitable.

The property rights literature allows us to explain why large, complex and relatively high-risk institutions, such as banks tend to be overwhelmingly dominated by stock or plc institutions, and why smaller, (relatively) more

specialised and lower-risk institutions such as savings banks, building societies and life assurance companies are often traditionally characterised by a preponderance of mutual institutions. Equally, while there is no inevitability that mutuals (such as UK building societies) which choose to diversify away from their core activities will convert to plc status, it could be argued that, the more ambitious are their long-term expansion plans (in terms of size, diversity and risk), the more likely they will be to convert at some stage. The logic of this argument also suggests, however, that there is no compelling reason why the remaining large mutual building societies should not continue to operate effectively with a mutual corporate structure.

Finally, it is important to emphasise that there is no ultimate *inevitability* about the relationship between business structure (eg diversified versus specialist firms) and organisational form (eg mutual versus plc form). The argument is that in practice, the wider is the range of business conducted, and the greater is the probability of a firm encountering high risk, the more probable it will be that the plc form will be judged to be the more appropriate organisational form. This is because the members (customers) of a mutual would be less inclined to a (possibly long-term) contractual relationship with a firm likely to be subject to substantial risk. This is especially true if the contractual relationship (eg a savings deposit) is such that the customer is subject to a down-side risk but does not benefit from the up-side potential of sharing in the profits of high-risk ventures. In such a case, it is more likely that specialist risktakers will provide the risk capital of the firm. However, this does not mean that specialist firms will inevitably be mutual or that diversified firms will always be plcs.

Margin advantage

There are three sources of competitive advantage for a mutual: the absence of external capital that needs to be serviced; the existence of free reserves which generate a rate of return, and frequently lower costs, although it is recognised that comparisons of cost ratios between plcs and mutuals are complicated by their different business structures.

The "margin advantage" is complex as it depends in part upon the rate of growth of the mutual. To maintain a constant capital ratio, and in the absence of external injections of capital, it can be shown that the required surplus (as measured by the rate of return on assets) rises as the growth rate of a building society rises. This is because, leaving aside debt capital, the only source of capital to a mutual is its profits. On the other hand, a plc can in principle finance high growth rates through external injections of capital.

The relationship between the growth rate (g) of a financial mutual (such as a building society) and the

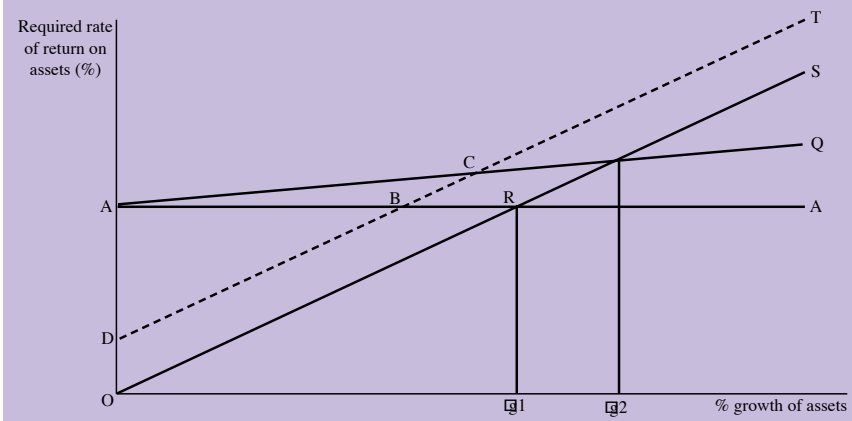
There is no compelling reason why the remaining large mutual building societies should not continue to operate effectively with a mutual corporate structure

required rate of return on assets (RROA) is given in Equation 1 below, on the assumption that the mutual holds no capital in excess of the minimum prudential capital-to-assets ratio (r).

$$RROA = (g.r) / (100 + 0.5g) \quad (1)$$

This relationship between the required rate of return on assets and the growth rate of assets is illustrated in Figure 1 as the line ORS.

Figure 1



It might be thought that the same relationship would apply to a plc, on the assumption that all capital was generated internally. This view is incorrect in two respects, however. Firstly, unlike mutuals, plc institutions pay dividends out of net profits which are therefore not available to add to reserves (capital). Hence, for any given growth rate, a positive dividend policy would inevitably imply a higher required rate of return on assets than that of a mutual. The plc relationship would therefore be drawn as the line DBCT in Figure 1, rather than the line ORS which is applicable for a mutual. Unlike the case of the mutual, this line does not go through the origin. The reason is that if a plc bank has a positive dividend policy (and assuming that dividends are not paid out of capital) a positive rate of return on assets will still be required even at zero growth. In contrast, zero growth for a mutual implies zero additional required capital and hence a zero required rate of return on assets. The second distinction emanates from the fact that the plc's shareholders are the owners of all the equity capital whether it be internally generated reserves or externally generated share capital. Hence, shareholders will have a required rate of return on this equity capital, and assuming a given minimum equity-to-assets ratio and no excess capital, this implies an exogenously determined required rate of return on assets. This is typically calculated using a model such as the Capital Asset Pricing Model (CAPM) whereby shareholders will require a premium over a risk-free return (such as a Treasury Bill). The size of the premium is related to the specific risk on the equities (typically measured by the co-variance of the equity return with the market return) and the excess of the market return over the risk free rate. This is illustrated in Equation (2).

$$ROE = Rf + Beta\ (Rm - Rf) \quad (2)$$

where ROE is the required rate of return on equity, Rf is the risk free rate, Rm is the equity market return, and Beta is as defined above.

Assuming that this required return on equity (and assets) is exogenously given, this implies that the relationship between the RROA and growth with internally generated capital is given by ABCT, where the distance OA indicates the exogenously determined rate of return on assets. Clearly, in the case where all capital is generated externally the relationship would be expressed by the line AA on the assumption that plc institutions such as banks could raise any amount of capital they desired at an exogenously fixed required return on equity. This latter assumption is probably unrealistic as faster growth rates are unlikely to be achievable without raising the specific risk profile of the plc institution (via riskier lending, for example). This would imply a relationship something like ACQ for plc banks with external capital (although the relationship may be non-linear), and ACT for internally generated capital.

In summary, Figure 1 produces powerful implications. Firstly, in the case of internally generated

capital (for plcs), the required rate of return on assets for a plc would exceed that of a mutual at any growth rate. Clearly, this implies a margin advantage to the mutual in the sense that it could operate with a lower interest margin than a plc in the same market, such as the mortgage market. Secondly, in the case where the plc raises all capital externally (in itself an extreme assumption), the mutual would still enjoy a margin advantage at growth rates of either less than g1 (on the most favourable assumption for plcs) or less than g2.

To gain some insight as to the critical growth rate implied by g1 we have undertaken some simulations. Table 1 provides a simulation matrix of RROAs versus growth rates for mutuals on the basis of Equation 1 and an assumed minimum and binding capital ratio of 4 per cent. Since we are assuming that plc banks raise all capital externally (ie along line AA in Figure 1), Table 2 translates a range of required ROEs into implied RROAs, again assuming a required minimum equity to assets ratio of 4 per cent (which would be appropriate for the mortgage market).

Clearly, in order to identify the critical growth rate g1 in Figure 1 we need some estimate of the cost of capital (required rate of return on equity) for plc banks. We do this using equation (2) and quarterly data over the recent period 1991–1996. Using quarterly data on the FT All Share Price Index, and the FT All Share Dividend Yield, the average annualised total market return over this period was 16.1 per cent and the average premium over the risk-free rate (proxied by the three-month Treasury Bill rate) was 9.1 per cent. Estimates of Betas for UK banks in recent years have tended to be at or slightly above unity. Hence, with the risk-free rate averaging 6.99 per cent over the period, Equation (2) produces a rough proxy of the cost of capital for a plc bank of 16.1 per cent.

Table 1

Required ROA for mutual building societies

(r = 4)

g	ROA
0	0.000
2	0.079
4	0.157
6	0.233
8	0.308
10	0.381
12	0.453
14	0.523
16	0.593
18	0.661
20	0.727
22	0.793
24	0.857

As can be seen from Table 2, this translates into a required rate of return on assets of around 0.64 per cent. Hence, if we contrast this with the figures in Table 1, it is clear that mutual building societies would face a margin advantage *vis-à-vis* plc banks at all growth rates up to 18 per cent per annum.

Over the period 1991–1995, the average annual growth rates of the remaining top 10 largest building societies ranged from 2 per cent for the Nationwide to 10.6 per cent for the Yorkshire. Furthermore, even during 1996, which was a period of relatively rapid growth in both market shares and assets following the earlier significant reductions in interest margins, growth rates still ranged from only 1.4 per cent for the Leeds and Holbeck to a maximum of 15.7 per cent for the Chelsea. For the mutual building society sector as a whole, total assets expanded by only 8.7 per cent during 1996. Clearly, these figures are well below the critical growth rate (g1) of 18 per cent, and it is therefore not surprising that mutual building societies have recently been able to reduce margins aggressively in the mortgage market and gain market share relative to the banks and in particular the recently converted "mortgage banks".

Indeed, the potential "margin advantage" of mutuals versus plcs in the mortgage market is understated by the above analysis to the extent that building societies have built up substantial excess capital during the early 1990s and hence do not face a binding capital constraint as assumed in Equation (1). This implies that mutual building societies could operate with lower ROAs (and hence lower interest margins) than implied by Table 1 if

they permitted a gradual reduction in excess capital levels. This, and the issue of the sustainability of the recent reductions in building society interest margins, is addressed more fully in a later section.

Although it could legitimately be argued that the previous analysis overstates the current cost of capital to banks, given the recent declines in the UK equity market (and hence a corresponding decline in the market premium), we have tried to guard against anomalous results by focusing on a recent six-year period. Furthermore, it should be recognised that in Tables 1 and 2 we make the most favourable assumption for plc banks (ie that they can raise unlimited amounts of capital at an exogenously fixed cost of capital), but make the equally unrealistic assumption that building societies face a binding capital constraint.

In reality, building societies have large amounts of excess capital and banks raise the vast majority of their capital internally. Hence, as we have already demonstrated that building societies will always have a margin advantage over plc banks when capital is raised internally, it seems highly probable in practice that mutual building societies will always have an 'inherent margin advantage' over plc banks.

Which strategy

As noted earlier, the margin advantage can be used either to offer services at low cost, or to build up capital and reserves. On the face of it, it would seem logical for a mutual to adopt the former strategy. However, there are advantages to building up reserves (security, credit-rating effects, enhanced strategic options etc) and during the 1980s this was the chosen strategy.

Table 2

Required ROA for banks

(r = 4)

ROE (per cent)	ROA (per cent)
2	0.080
4	0.160
6	0.240
8	0.320
10	0.400
12	0.480
14	0.560
16	0.640
18	0.720
20	0.800
22	0.880
24	0.960

The result is that reserves were augmented and profits were buoyant often at a time when the opposite was the case for their bank competitors.

However, this in itself, though it was unknown at the time, made eventual conversion an attractive option. The reserves (net worth) belong to the members in just the same way as the equity capital belongs to banks' shareholders. As reserves were built up (because building societies were maintaining a margin wider than was necessary) the implicit or embedded value to the owners was being steadily increased even if they were unaware of it at the time. And yet, because there is no market in ownership stakes, the value could not be released. Conversion is one way that embedded value can be released to owners in the absence of a secondary market in ownership claims.

In effect, the demand to unlock value can be viewed as an *ex post* payment to members as an alternative to an *ex ante* payment in the form of a lower mortgage interest rate or higher interest rate on deposits. An alternative interpretation is that, because of the excess margin, building societies were imposing forced savings on their members. Again, it is perhaps to be expected that, at some stage, members would want their forced savings to be released.

The picture is not quite accurate in one important respect. The two images which are presented above (*ex post* liquidation, and the element of forced saving) both presuppose that those who gain from the conversion (current members) are the same as those who, over many years, contributed to the reserves (net value) of the society, and who were forced to save in this form.

Neither of these is in fact the case. This means that the current generation of owners can appropriate value which has been built up over many years and decades by

previous generations of owners. In effect, there is an inter-generation financial transfer.

Past behaviour versus potential behaviour

Boxall and Gallagher (1997) analyse the past performance of building societies relative to plc banks in order to "help to focus the debate about the special nature of mutuals" (p 9). The argument being that if mutual building societies have not in the past demonstrated behaviour distinct from plcs, and have not used their "special nature" to the benefit of their members then there is little value in the mutual form.

However, with an interest margin advantage, building societies can adopt one of three strategies: (1) maintain a wider margin than is necessary and build up reserves through high profits; or (2) maintain a wide margin but distribute some of the profits at the end of the year; or (3) maintain a low (but sustainable) margin and increase market share. Boxall and Gallagher choose to focus on (1), which was adopted by building societies during the 1980s. But our analysis concludes that (2) and especially (3) are alternative viable options for mutual building societies and ones that have been used increasingly in recent years.

Hence, it makes little sense to rely on the *past* behaviour of building societies as a guide to *potential future* behaviour. In this respect, the recent fortunes of the remaining ten largest building societies and their recently converted "mortgage bank" counterparts provide an interesting case study. Between early 1996 and late 1997, for example, the largest remaining building societies reduced their interest margins by an average of 22 per cent, or 47 basis points, and increased their share of the mortgage market from 26 per cent to 38 per cent and their share of the savings market from 14 per cent to 18 per cent. In contrast, over the same period the mortgage market share of the "mortgage banks" declined from 44 per cent to 33 per cent while their share of the savings market fell from 33 per cent to 14 per cent. Furthermore, this decline in the market share of the "mortgage banks" has continued through 1998.

It can be argued that there is a powerful systemic interest in sustaining a strong mutual sector

With respect to the sustainability of the margin reductions, a recent study by SBC Warburg Dillon Read analyses this issue by focusing on the sustainability of the reduced interest and profit margins of the 10 largest building societies in 1996. Reflecting our own earlier analysis (Equation 1), the key issues are the combination of the reduced profit margin, assumed likely annual average growth, and excess capital relative to prudential minima.

On the basis of its analysis, SBC Warburg Dillon Read concludes that four of the ten largest building societies could sustain their 1996 profit/interest margins and projected asset growth indefi-

nitely. Of the remaining societies it is estimated that the 1996 combination of profit margin and asset growth could be sustained for between nine and 34 years.

Systemic advantage

It can be argued that there is a powerful systemic interest in sustaining a strong mutual sector, and therefore it is a legitimate issue for public policy. The key issues in this regard may be briefly summarised:

- the benefits of a mixed ownership structure in the financial system;
- in an uncertain environment diversity has advantages as it cannot be predicted which form is best suited to particular circumstances;
- enhancing competition through the potential for different behaviour. With mutuals and plcs in competition with each other, there is a choice of receiving the margin advantage of a mutual *ex ante* through more competitive prices or, for plc shareholders including those of converted mutuals, receiving dividends *ex post*;
- the systemic value derived from mixed corporate governance arrangements;
- the systemic advantage through having a mix of institutions with different portfolio structures which has the potential to reduce overall systemic risk because institutions are not homogeneous.

This suggests a financial system characterised by an array of corporate structures such as plcs and mutuals will be inherently more stable than one populated by only the former

There is a public policy interest in sustaining a competitive market environment through different organisational forms because firms with the same form tend to behave in a similar manner. Choice and variety is an ingredient of consumer welfare. The analysis suggests there are clear systemic benefits to the existence of a continuing and thriving mutual building society sector in the sense that these institutions tend to adopt a lower risk profile, are not subject to the asset substitution agency problem, and are therefore not subject to the "herd instinct" to the same degree. This suggests that a financial system characterised by a mixed array of corporate structures, such as plcs and mutuals, will be inherently more stable than one populated by only the former. This is likely to be particularly significant in economic downturns when plc financial institutions may be particularly prone to risk-taking behaviour.

Conclusions

The overall conclusion is that mutuality as a form of economic organisation is viable and building societies have strong strategic options. The focus must ultimately be upon their "efficiency advantage". However, the pressures on mutuality are real though they are not a reflection of any intrinsic weakness in the concept. The mutual firm is a viable entity.

The vulnerability of mutuals is twofold. Firstly, there is the option

of engineering inter-generation subsidies whereby current owners are able to unlock embedded value created by past owners, and deny the future generations the intrinsic efficiency advantage of the mutual.

Secondly, the time horizon of current owners may be very short-term in that the present value of the conversion bonus may implicitly be valued more highly than a larger amount that can be accrued over a period of years due to the intrinsic margin advantage.

Given the inherent efficiency advantage of mutual financial institutions, and the systemic advantages of a mixed financial structure, there are economic and welfare benefits to be derived from the continuation of a viable and successful mutual building society sector, albeit less significant in terms of total assets and average size of institution than in the past. In order to derive the maximum benefit from a continuing mutual sector, it is clearly important that the inherent potential efficiency advantage of mutual building societies can be translated into effective pricing behaviour. The analysis in previous sections suggests that, if building societies wish to maintain their mutual status, there is an overwhelming case to use the margin advantage to give benefit either *ex ante* (in the form of pricing), or *ex post* in the form of "dividends" or loyalty bonuses. The policy of continually building up excess reserves is likely, therefore, to be unviable.

The potential "margin advantage" means that building societies as mutuals do have the potential to remain a powerful competitive force in the financial system providing the sector remains large enough.■

Biographical note

Leigh Drake is Professor of Monetary Economics and David Llewellyn is Professor of Money and Banking at Loughborough University. In 1997 they were commissioned by the Building Societies Association to undertake a research project entitled *The Economics of Mutuality and the Future of Building Societies*. Seven project papers were published jointly by the Loughborough University Banking Centre and the BSA in July 1997.

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CAPITAL REGULATION AND UK BANKS' BEHAVIOUR

by Tolga Ediz, Ian Michael and William Perraudin, Bank of England

This article summarises recent research on the effect of regulatory action on the behaviour of UK banks. It adds to existing studies in a number of ways, in particular because it considers a non-US banking system, and a system where capital requirements are varied on a bank-by-bank basis. It employed confidential, quarterly supervisory balance sheet and income data for 94 UK banks from the fourth quarter of 1989 to the fourth quarter of 1995.

A key function of the banking system is to take on and manage a wide variety of risks, including credit, market and operational risk. Bankers take account of the losses which can arise from these risks in the way they price their services, for example in the spread between deposit and lending rates. Nevertheless, it is necessary for banks to have a cushion of capital so that unexpectedly large losses fall on shareholders rather than affecting the value of depositors' funds.

Banks' capitalisation is subject to regulation because there is a strong public interest in the soundness of banks. This arises in part from their role in the payments system, and from concerns about systemic stability — financial interlinkages between banks and effects on confidence, mean that the collapse of one bank could bring down other, hitherto healthy, banks.[1] There is also a concern to protect the interests of small, often unsophisticated, retail depositors.

In 1988, the G-10 countries agreed the Basle Accord framework for minimum capital requirements for internationally-active banks. The Accord requires banks to maintain equity and quasi-equity funding equal to a minimum percentage (set at 8 per cent) of their risk-weighted asset base: assets are assigned weights on the basis of the risk (especially credit risk) which they pose. Authorities' intentions in adopting the Accord were, first, to reinforce financial stability; second to establish a level playing field for banks from different countries; and third, in the case of some countries, to reduce the potential costs of government-provided deposit guarantees.

Impact of capital regulation

Following the adoption of the Accord, there have been an appreciable number of theoretical and empirical studies of the impact of regulators' requirements on banks' behaviour. Most of these studies are of the US banking system. Researchers have focused on two key questions:

(i) Have possibly excessive differentials in the weights applied to different broad categories of assets induced banks to substitute away from highly risk-weighted assets to lower or zero-weighted assets?

(ii) Might the very broad weighting categories of the Basle Accord

type encourage banks to shift *within each asset category* towards riskier assets?

Regarding the first issue, in the early 1990s, US banks shifted sharply from corporate lending, which is weighted at 100 per cent, to investing in government securities, which in the original Basle Accord carried no capital requirement.[2] A number of papers made a case that capital requirements played a role in this switch[3], although the conclusion was not unanimous — Hancock and Wilcox (1993), for example, present evidence that US banks' own internal capital targets explain the decline in lending to the private sector better than do the capital requirements imposed by regulators. Overall, the evidence suggests that the incentives to switch to lower risk-weighted assets depend on a number of factors, including the state of the macro-economy, which affects the demand for bank loans.

On the second question, theoretical models suggest such effects are possible but only under certain assumptions[4], and an empirical assessment is therefore required (see Jacques and Nigro, 1997, for a recent study of the US evidence).

Other issues raised with regard to the effectiveness of capital requirements are:

(i) whether they do in fact lead banks to hold more capital than they would choose to for commercial reasons;

(ii) how any increases in capital ratios are achieved: by increasing capital, or reducing risk-weighted assets.

This research adds to existing studies in a number of ways, in particular because it considers a non-US banking system

This article summarises recent Bank of England research on the effect of regulatory action on the behaviour of UK banks, which is set out fully in the authors' paper, "Bank Capital Dynamics and Regulatory Policy". This research adds to existing studies in a number of ways, in particular because it considers a *non-US* banking system, and a system where capital requirements are varied on a bank-by-bank basis (see below). It employed confidential, quarterly supervisory balance sheet and income data for 94 UK banks from 1989 Q4 to 1995 Q4.

The two issues examined were:

(i) what is the impact of supervisory requirements and pressure from regulators on bank capital, when capital ratios approach their regulatory minimum?

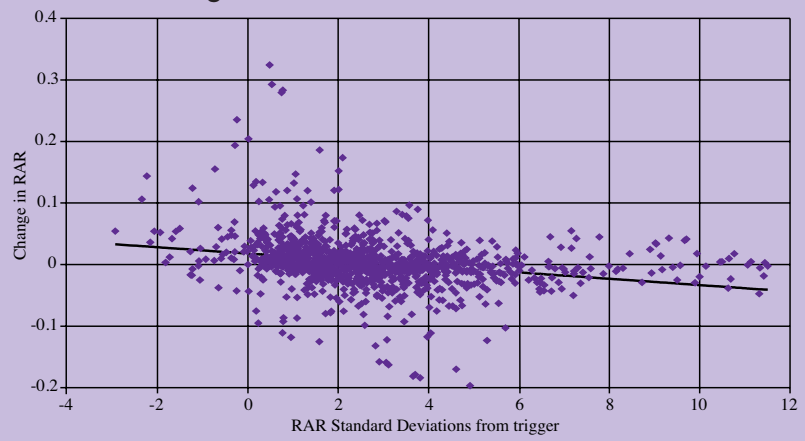
(ii) when banks are subject to regulatory pressure, which items in their balance sheets do they typically adjust in order to increase their capital ratios?

Bank capital regulation in the UK

The UK approach is fully consistent with the basic standards laid down in the Basle Accord. But in contrast to practice in many countries, UK supervisors set *bank-specific* capital requirements, which are nearly always above the Basle minimum.

The ability to vary a bank's capital requirement administratively provides regulators with a very useful lever with which to influence the actions of banks' management

Chart 1 Change in RAR



Source: Ediz, Michael and Perraudin (1998)

These bank-specific ratios are varied from time to time to reflect the supervisors' evaluation of the bank's loan book or their perception of the strength of systems of control or the competence of management.

Furthermore, UK supervisors set two capital requirements: a "trigger" ratio, which is the minimum capital ratio with which a bank must comply, and a "target" ratio set somewhat above the trigger ratio. The gap between the target and trigger acts as a buffer in that regulatory action is initiated when a bank's risk asset ratio (or RAR) falls below the target. If the RAR falls below the trigger ratio, which is a legal minimum, supervisors take more drastic action, and ultimately may revoke a bank's licence. The ability to vary a bank's capital requirement administratively provides regulators with a very useful lever with which to influence the actions of banks' management.

It might be expected that these supervisory arrangements would:

- cause banks, experiencing or fearing regulatory pressure, to boost their capital ratios when their RARs enter a region close to the regulatory minimum;
- imply that *changes* in a bank's trigger ratio would cause a bank's management to pay very close attention to the adequacy of its capital, and cause them to undertake particularly vigorous efforts to correct any potential weakness in its capital ratio. A change in the trigger ratio is an important signal from the supervisors.

The data on UK banks

Inspection of charts of the data available to us on banks' capital tends to bear out the first possibility listed above. It does appear that the closer banks are to their bank specific regulatory minimum, the more likely they are to:

- increase their actual capital ratios;

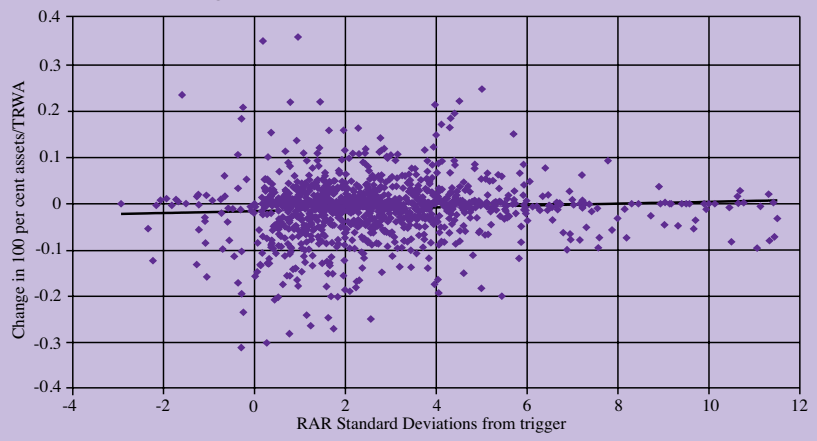
- reduce the size of their non-mortgage loan books to a modest extent.

Chart 1 shows a scatter diagram of changes in a bank's RAR (pooled across banks and time periods, so yielding 2,350 observations) plotted against the size of the capital buffer. The straight line shows the average relationship between the RAR and capital buffer.[5] The magnitude of the capital buffer is measured as the gap between the actual RAR and the regulatory minimum, divided by a measure of how volatile the RAR is.[6] The reason is that banks are likely to change their behaviour, and boost their RARs, when they are in danger of hitting the regulatory minimum. The likelihood of hitting the minimum depends not only on the absolute distance of the RAR from the trigger, but also on how variable a bank's RAR tends to be through time.

This chart clearly suggests that low initial levels of capital buffer induce banks to re-build their capital levels. But perhaps the most interesting feature of the chart is the fact that there is evidence of particularly strong upward changes in the RAR at levels close to the trigger. This suggests that there may be a distinct shift in the way in which banks set capital when their capital ratios reach particularly low levels in relation to the regulatory minimum.

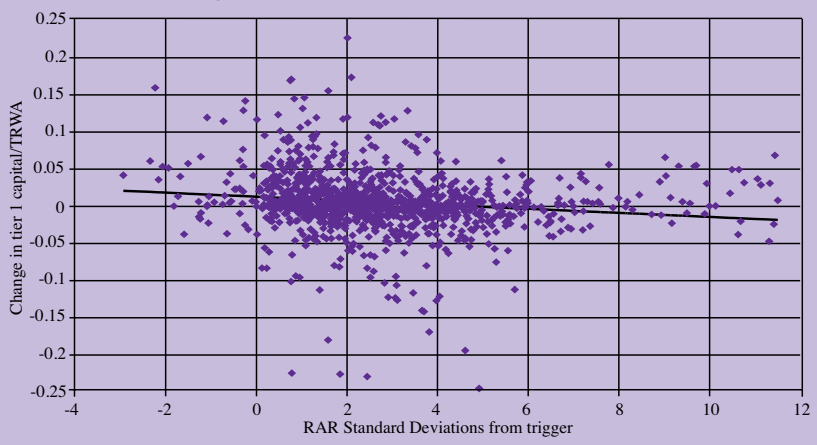
The second question of interest is exactly *how* banks go about increasing their capital ratios when they are low. Banks might cut back

Chart 2 Change in 100 per cent assets/TRWA



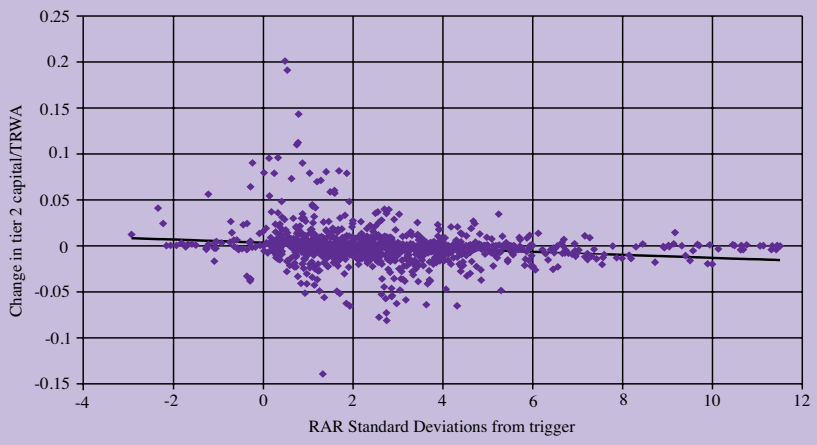
Source: Ediz, Michael and Perraudin (1998)

Chart 3 Change in tier 1 capital/TRWA



Source: Ediz, Michael and Perraudin (1998)

Chart 4 Change in tier 2 capital/TRWA



Source: Ediz, Michael and Perraudin (1998)

highly risk-weighted assets, such as corporate loans, in favour of government securities, for example, which attract a lower risk weight. Alternatively, banks might boost their capital directly by issuing new equity or by cutting dividends. As noted earlier, the possible substitution by banks towards lower risk-weighted assets — which could in some circumstances create a "credit crunch" — has been examined in the case of US banks in the early 1990s in a series of papers.

Chart 2 shows the change in the highest (100 per cent) weighted assets as a ratio to a bank's *total* risk-weighted assets plotted against the capital buffer.[7] The chart suggests that there is only a slight positive relationship between changes in 100 per cent-weighted assets and banks' capital ratios (RARs). This implies that UK banks do not react to low capital levels by reducing the proportion of loans to corporates and households in their balance sheets. In turn, this suggests that even if many banks' capitalisation were close to the regulatory minima, they might not react in a way which could induce a "credit crunch".

Charts 3 and 4 repeat Chart 1 but show different capital ratios. Chart 1 dealt with the whole of banks' capital bases. Charts 3 and 4 break this down into, respectively, Tier 1 capital, which is core capital (largely shareholders' equity), and Tier 2, which includes quasi-equity instruments such as subordinated debt. The charts show ratios of these measures of capital to total risk-weighted assets (TRWA). It appears that the relationship between changes in *total* capital and the strength or weakness of banks' initial capital levels is reflected in both Tier 1 and Tier 2 capital taken individually.

Isolating the impact of the regulator

The charts just discussed provide valuable clues as to how banks react when their capital falls close to the regulatory minimum. However, one must undertake more sophisticated statistical analysis if one wishes to assess the impact on capital of regulatory pressure in isolation, holding other influences on capital constant. This is important because when a bank falls into financial distress, it may seek to adjust its own internally generated capital targets, *even without intervention by regulators*.

Capital requirements effect banks' capital ratio decisions

We therefore estimated an econometric model in which changes in banks' capital ratios depend on the (lagged) level of the ratio, a range of variables which proxy for the bank's internal capital target, and variables which may be regarded as measuring regulatory pressure. The variables used to proxy banks' capital targets were:

- net interest income/TRWA[8]; fee income/net interest income; and 100 per cent-weighted assets as a proportion of TRWA — these variables reflect the nature and riskiness of a bank's operations;
- deposits from banks/TRWA; off-balance sheet assets as a proportion of TRWA — these are intended to reflect the bank's vulnerability to runs on deposits, although they may also capture the degree of financial sophistication of the bank and its consequent ability to economise on capital;
- total profit and loss and total provisions as proportions of TRWA — these are indicators of the bank's financial health.

Regulatory pressure was measured through two separate dummy variables which take the value of unity if:

- the bank has experienced an upward adjustment in its trigger ratio in the previous three quarters;
- the RAR falls close to the regulatory minimum[9], and otherwise equal zero.

The econometric model, and estimation results for the equation for the level of capital chosen by banks, is set out in the Box. The main findings were:

Regression analysis

We formulate a dynamic, multi-variate panel regression model in which changes in capital ratios depend on the lagged level of the ratio, a range of conditioning variables describing the nature of the bank's business and its current financial health (these proxy for the bank's internal capital target), and variables which may be regarded as measuring regulatory pressure. Formally, our model may be stated as:

$$Y_{n,t+1} - Y_{n,t} = \beta_0 + \sum_{j=1}^{N} \beta_j X_{n,t,j} + \gamma Y_{n,t} + \varepsilon_{n,t}$$

where $E(\varepsilon_{n,t}) = E(X_{n,t,j}\,\varepsilon_{n,t}) = 0$, t indicates the time period and where

$X_{n,t,j}$ $j = 1, 2, ...N$ are a set of regressors. The error term is assumed to be

auto-correlated in that:

$$\varepsilon_{n,t+1} = \rho\varepsilon_{n,t} + \nu_{n,t} \qquad \forall n,t$$

where $E(\nu_{n,t}) = 0$ for all n, t, and $E(\nu_{n,t}\,\nu_{m,s}) = 0$ for all t,s,n,m except when $t = s$ and $n = m$. To include random effects, we supposed that for any bank,

$$E(\nu_{n,t}^2) = \sigma_n^2.$$

We measure regulatory pressure in two ways. We incorporate a dummy variable which equals one if the bank has experienced an upward adjustment in its trigger ratio in the previous three quarters. Second, we include a dummy which equals unity if the RAR is less than one bank-specific standard deviation above the bank's trigger. Thus, our hypothesis is that there exists a zone above the trigger in which the bank's capital ratio choices are constrained by regulatory pressure. In this, our study is comparable to Jacques and Nigro (1997).

The dummy associated with a one-standard deviation zone above the trigger may be regarded as introducing a simple regime switch in the model for low levels of the RAR. To generalise this regime switch, we also estimate switching regression models in which all the parameters on the conditioning variables (not just the intercept) are allowed to change when the RAR is less than one standard deviation above the trigger. This specification allows for the possibility that all the dynamics of the capital ratio change when the bank is close to its regulatory minimum level of capital.

In formulating our panel model, we adopt a random rather than a fixed-effects specification. We are not so interested in obtaining estimates conditional on the particular sample available which is the usual interpretation of the fixed-effect approach (see Hsiao, 1986) and so random effects seems more appropriate. Thus, we suppose that the variance of error terms has a bank-specific component. Furthermore, we suppose that the residuals are AR(1). The latter assumption seems natural as one might expect shocks to register in bank capital ratios over more than a single quarter. The fact that error terms are auto-correlated somewhat complicates estimation since our model contains lagged endogenous variables. To avoid the biases in parameter estimates this would otherwise induce, we employ the instrumental variables approach introduced by Hatanaka (1974).

Results for the regressions in which the RAR is the dependent variable are set out in the Table overleaf.

Table **RAR Regression Results**

		RAR < trig + 1 s.d.	RAR > trig + 1 s.d.
Constant	0.05	0.08	-0.38
	(1.38)	**(1.63)**	**(-0.73)**
Change in Trigger dummy	0.27	1.46	-
	(1.42)	**(1.94)**	**-**
Fee income/net interest income	0.00	-0.01	0.00
	(0.40)	**(-0.17)**	**(0.35)**
Net interest income/TRWA	0.04	4.57	-0.66
	(0.02)	**(0.41)**	**(-0.23)**
Deposits from banks/TWRA	-0.19	0.54	-0.30
	(-1.82)	**(1.88)**	**(-2.47)**
(RAR-Trigger) less than 1 s.d.	0.44	-	-
	(4.64)	**-**	**-**
Off bal. sheet assets/TRWA	2.21	2.74	2.68
	(1.65)	**(0.80)**	**(1.64)**
Profit and loss /TRWA	-3.93	-8.35	-4.45
	(-1.13)	**(-0.57)**	**(-1.27)**
Total Provisions/TRWA	1.29	3.96	0.86
	(1.26)	**(1.32)**	**(0.70)**
100% weighted assets/TRWA	0.19	0.31	0.05
	(1.52)	**(1.05)**	**(0.32)**
Lagged dependent variable	-0.44	-2.62	0.77
	(-0.81)	**(-0.92)**	**(1.13)**

Notes: TRWA and RAR denote total risk-weighted assets and risk asset ratio. Data are for 94 banks from 1989 Q4 to 1995 Q4. Estimates are scaled by 100. All regressions employ the Hatanaka method (see Hatanaka, 1974, for details). 't' statistics appear in parentheses.

- there is strong evidence that capital requirements significantly affect banks' capital ratio decisions. Capital requirements induce banks to increase their capital ratios even after one allows for internally-generated capital targets. The estimates suggest that banks increase their RARs by around $^1/_2$ per cent per quarter when their capital ratio approaches the regulatory minimum. In addition, when supervisors impose a discretionary increase in a bank's trigger ratio, on average banks respond by increasing their RAR by $^1/_3$ per cent per quarter;
- in addition to examining the impact of the two measures of regulatory pressure, we also undertook estimation work in which we allowed for the possibility that the relative importance of different factors in determining capital changes markedly as a bank's capital comes close to the regulatory minimum. This suggested, as might be expected, and as is suggested by Chart 1, that an increase in the trigger has a particularly large effect where banks are already close to the minimum level of capital which the regulator requires;
- the estimated effects of the variables which proxy for banks' internal capital targets were plausible. For example, higher profits are accompanied by a reduction in capital ratios, while higher provisions or 100 per cent (ie riskier) assets are followed by an increase. While the immediate impact of high profits is to boost capital levels, high underlying profitability provides a buffer against unexpected losses, and stronger profits may therefore allow a bank prudently to operate with lower levels of capital. Similarly, higher provisioning suggests that the quality of a bank's book may have deteriorated, while — in very broad terms — an increase in the proportion of 100 per cent-weighted assets suggests that a bank's portfolio has become more risky. Both higher provisioning and a greater share of 100 per cent-weighted assets would thus tend to be associated with a need for stronger capitalisation to provide an adequate buffer against losses;
- on whether banks adjust their capital ratios through the asset side of their balance sheet (by substituting towards assets with lower risk weights, such as government securities) or by raising additional capital, the estimation results[10] suggested that banks do not rely significantly on substitution away from high risk-weight assets to meet their capital requirements as they approach the regulatory minimum. Thus, banks respond by raising additional capital.

UK banking supervisors have a powerful influence on levels of bank capital

There is evidence that this impact is concentrated particularly in core (Tier 1) capital.

Conclusions

The research suggests that UK banking supervisors have a powerful influence on levels of bank capital. Banks react strongly when capital falls near to the regulatory minimum, and when supervisors increase their minimum regulatory capital ratio. It appears that banks achieve increases in their capital ratios primarily by issuing more capital, rather than through substitution away from assets such as corporate loans which attract high risk weights within the Basle Accord framework. This suggests that regulatory capital requirements reinforce stability of the system without distorting banks' asset choices.■

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Notes

1 On this, see Ian Michael's article on: "Financial Interlinkages and Systemic Risk", FSR, Spring 1998.
2 The UK has in fact always been super-equivalent in this respect, with a positive capital requirement for holdings of government securities.
3 See, for example, Hall (1993), Haubrich and Wachtel (1993), Calem and Rob (1996) and Thakor (1996).
4 See, for example, Rochet (1992).
5 Calculated through a simple OLS linear regression.
6 Specifically, the capital buffer is measured as the distance between the lagged RAR and the trigger divided by the sample standard deviation of the RAR for each individual bank.
7 As defined in footnote 6.
8 TRWA = total risk-weighted assets.
9 'Close' is defined as the RAR being less than one bank-specific standard deviation above the bank's trigger. This specification was adopted because - as noted above - the degree to which a bank is 'close' to its trigger depends not just on the absolute percentage difference between the current RAR and the trigger, but also on the volatility of the RAR.
10 Not reported here: see Ediz, Michael and Perraudin (1998).

ALTERNATIVE ROUTES TO BANKING STABILITY: A COMPARISON OF UK AND GERMAN BANKING SYSTEMS

*by Glenn Hoggarth, Alistair Milne and Geoffrey Wood, Bank of England**

The banking systems of Britain and Germany are among the most stable in the world. In both countries bank failures are exceedingly rare, and even periods of difficulty among more than a few banks very uncommon. Yet the two systems are very different. They differ both in structure and in how banks in the two countries behave. In this article we compare the two systems, so as to bring out the key features which have contributed to their stability and to see if anything can be said about the prospects for their continuing stability in the future. We start, though, by looking at recent periods of major instability — not in Britain and Germany, where there have been no such episodes for many years but in other countries, so as to highlight the kind of events which can bring serious disturbances to a country's financial system. Then we turn to describing the systems of Britain and Germany, showing how both have experienced substantial liberalisation in recent years. This leads to a comparison of banking profitability in the two economies, and to an appraisal of the factors which may have contributed to the radically different experience of the two countries in this regard. This enables us to offer some suggestions as to the impact of liberalisation and of inflation on banking sector stability.

Over the past two decades, banks in a number of countries have experienced severe problems. In some cases the institutions would have failed without taxpayer support, and in others whole sectors of the financial system would have failed without a period of low interest rates in which they could restore profits and rebuild capital.

Such episodes appear to require a double trigger — financial deregulation along with a period of macroeconomic instability. The effects of these seem to be transmitted through rapid growth in bank credit and asset prices.

There are various explanations for this linkage. One is quite simply that deregulation allows banks and other institutions to enter new areas of business, where they have no experience. Some maintain that problems have been exacerbated by an increase in the variability of asset prices, while others (eg Hellwig, 1996) suggest that economies have become more volatile.[1] It has also been claimed that deregulation affects stability not simply by promoting bank expansion, but by changing institutional and ownership structures. This affects attitudes to risk, and the consequent changes may well be not only frequently unpredicted but actually unpredictable.

How does the evidence bear on these explanations of why the combination of liberalisation and macroeconomic instability may lead to a period of financial instability?

Recent unpublished work by the Bank of England has made cross-country comparisons, drawing on the experience of developed countries. Table 1 sets out an overview (derived from that study) of financial problems and associated economic conditions.

Certain features stand out from this table. Most important, financial liberalisation was a necessary although not a sufficient pre condition for banking problems. A

Table 1 Recent banking problems in major economics

(1) Systemic

		Pre-crisis			During crisis	
Country	**Year**	**Macroeconomic**	**Type of financial liberalisation**	**Asset price bubble?**	**Macro-economic downturn**	**Induced by higher interest rates?**
Finland	1991-94	Boom; loosening in monetary policy	Credit quantities; foreign banks	Equities, residential and commercial property	Yes	Yes
Norway	1987-93	Boom; loosening in monetary policy	Credit quantities; interest rates	Equities, residential and commercial property	Yes	No - oil price fall
Sweden	1990-93	Boom; loosening in monetary policy	Credit quantities; interest rates	Equities, residential and commercial property	Yes	Yes
Japan	1992-present	Boom; loosening in monetary policy	Credit quantities; interest rates	Equities, residential and commercial property	Yes	Yes

(2) Bank loan losses

		Pre-losses			During losses	
Australia	early 1990s	Boom; loosening in monetary policy	Credit quantities; interest rates	Equities, and commercial property	Yes	Yes
United Kingdom	early 1990s	Boom; loosening in monetary policy	Credit quantities; interest rates	Commercial and residential property	Yes	Partially
United States	early 1990s	Boom; loosening in monetary policy	Banking licensing made easier (intense competition)	Commercial property	Yes	Partially

(3) No real problems (late 1980s/early 1990s)

	Lessons from past	**Late 1980s/early 1990s**			**During late 1980s/ early 1990s**	
Canada	Yes, 1985	Boom	no recent changes; foreign banks faced capital controls	Commercial property	Yes	Partially
Nether-lands	Yes, late 1970s/early 1980s	Boom; loosening in monetary policy	no recent changes	no	Modest	Yes
Germany		Boom*	no recent changes; limited new entrants	Commercial property	Yes*	Yes*

* following German unification

downturn in the economy, usually accompanied by a severe downturn in asset prices across a range of markets, also seems to be required.

This is consistent with two wide-ranging studies of developing economics and of smaller industrial ones. Lindgren *et al* (1996) analysed eight countries which faced systemic banking problems in the 1980s — six developing ones (Argentina, Chile, Ghana,

Philippines, Uruguay and Venezuela) and two developed ones (Norway and Finland). In every case, an economic downturn accompanied the crisis and liberalisation preceded it.[2] Kaminsky *et al* (1998) sought to provide leading indicators to warn of an approaching crisis on the basis of a study of previous crises in 25 larger emerging and industrial countries over the years 1970-95.[3] They found the best indicators to be a rise in broad money relative to monetary base (a proxy for financial liberalisation), a rise in real interest rates, and declines in the growth of output and in equity prices.[4]

This certainly does not, however, imply that financial liberalisation produces instability. A number of economies which were liberalised for some time before an economic downturn — including Germany — did not experience banking problems when an economic downturn came. Most, indeed, appear to have banking systems with well-developed methods of containing risks. The picture rather seems to be that there is vulnerability *during the process* of liberalisation, a process in the course of which new entrants, both domestic and foreign, fare worse than established institutions.

Another feature of Table 1 is the key role property prices appear to play in triggering financial problems. This was highlighted again last year in the financial crises in east Asia.[5]

Credit and asset prices in the UK and Germany

Table 2 shows that the growth of bank credit relative to GDP has been more volatile in the UK than in Germany over the past 25 years, as has aggregate asset price inflation. Disaggregation shows that property price inflation has been consistently more volatile in the UK. Table 3 shows correlations between the annual growth in real asset prices and total credit/GDP in the UK and Germany, split into two periods — 1971-82 and 1983-97. The earlier period broadly coincides with the period prior to the lifting of credit controls in the UK.

The whole period correlations suggest there is a strong positive relationship between growth in the credit/GDP ratio and residential property prices in the UK since the early 1970s. The sub-period correlations suggest that in the UK the interaction has been stronger since the early 1980s.

But in the UK and Germany the combination of financial liberalisation and the interaction between credit and asset prices is not sufficient to explain the difference in banking sector experiences that is summarised in Table 1. Financial liberalisation had already gone a

Table 2 **Standard deviation of annual growth in real asset prices and credit/GDP 1971-97**

	Credit/GDP	Real total asset prices (1980=100)	Real house prices (1980=100)	Real equity prices (1980=100)	Real commercial property prices (1980=100)
1971-97					
UK	7.92	9.42	9.83	26.57	-
Germany	2.18	-	8.67[1]	22.82	-
1971-82					
UK	10.38	11.60	12.07	38.50	-
Germany	1.90	-	10.73[2]	13.13	-
1983-97					
UK	5.62	7.52	8.04	11.56	18.72
Germany	2.44	5.14	6.82	27.24	15.60

1 1972-97;
2 1972-82.
Data source: BIS, Jones Lang Wootton.

Table 3 Correlations of annual growth in credit/GDP and real asset prices

	Total credit/ GDP	Total asset prices	House prices	Equity prices	Commercial property prices
1971-97	UK	0.30	0.66	-0.27	-
	Germany	-	0.29[1]	0.30	-
1971-82	UK	0.18	0.65	-0.40	-
	Germany	-	0.59[2]	-0.26	-
1983-97	UK	0.57	0.68	0.28	0.14
	Germany	0.01	-0.11	0.35	-0.36

1 1972-97;
2 1972-82.

substantial way in both countries. (See annex A.) It therefore remains to be explained why both the interaction between asset prices and credit, and the impact of these variables on bank performance, were more pronounced in the UK than in Germany. We explore answers to these questions and draw out some implications in the remainder of the paper.

Liberalisation, structure and performance

Although both countries experienced considerable financial liberalisation, the impact of this on their financial sectors has not been the same. There are considerable differences in the institutional structure of the German and UK banking systems. This is reflected in the shares of assets held by different types of institution in the two countries (Table 4).

Table 4 Shares of assets December 1997

German banking system*	% of total bank assets
'Big Banks' (Deutsche, Dresdner, Commerzbank)	10
Regional banks	13
Landesbanks	18
Savings banks	19
Co-operative sector	14
Mortgage banks	15
Specialised credit institutions	9
Branches of foreign banks	2
Private banks	1
UK Banking System**	**% of sterling assets booked in UK**
UK banks	67
Foreign banks	23
Building Societies	10

* Source: Deutsche Bundesbank Bankenstatistik May 1998.
** Source: Bank of England Monetary and Financial Statistics May 1998.

While there are few legal or regulatory barriers which impede the choice of business activities by German banks, there is in fact a clear demarcation into a number of different categories. The UK banking system, on the other hand, is dominated by a few large commercial banks all engaged in a wide range of business. In 1994 the largest five banks accounted for 57 per cent of banking business in the UK compared with 17 per cent (1995) in Germany.[6] Annex A shows the main episodes of financial deregulation and liberalisation in the UK and Germany. Interest rates have been market-determined in both countries for many years — in Germany since 1967 and in the

UK since 1971. While the volume of lending has also been left to the market in Germany, the UK introduced controls (the "corset") which restricted the volume of bank credit during much of the period 1973-1980. Deregulation of bank activities was thus only completed in the UK by 1980. In neither country were there restrictions separating commercial and investment banking activity.

Another key feature of the UK banking system is the presence of a large number of branches and subsidiaries of foreign banks in London.

International and investment banking is a major industry in the UK, but because of its international nature this business is not directly relevant to the question of what triggers losses in the domestic banking system. For this reason the figures in Table 4 are restricted to UK sterling assets, the best available measure of domestic banking business. This shows that foreign banks have a significant share of total sterling business in the UK, although this is largely in wholesale lending to large corporates and to local authorities.

Innovation in retail banking products and payments services has proceeded more rapidly in the UK than in Germany. This is especially true in the mortgage and credit card markets, but corporate debt markets, in both short-term commercial paper and long-term bonds, have also developed much further in the UK than Germany.

Chart 1 **Pre-tax profits over total assets**

... aggregate banking ... profitability has been higher but more variable in the UK

According to published accounting data, the principal difference in the performance of the aggregate banking sectors of the two countries is that profitability has been higher but more variable in the UK. Over the past 25 years the pre-tax annual profits of UK retail banks averaged about 1.2 per cent of total assets (Chart 1), and ranged from a minimum of 0.4 per cent to a maximum of 1.6 per cent. The annual profits of the German banking system, by contrast, were less than 0.6 per cent of total assets on average over the past 25 years and, according to the published data, varied much less than in the UK, from a minimum of 0.4 per cent of total assets in 1990 to a maximum of 0.75 per cent in 1983. The lower variability might at first glance simply imply better risk control, but something more must be involved, for as Chart 1 shows, even the worst performance of the UK commercial banks has resulted in a return on assets only very slightly below German levels. In all

Table 5 **Profit and loss accounts**

% of total assets (except costs/income)	Germany		UK
	All banks	Excluding landesbanks and mortgage banks	Major banks and building societies
	1992-97	1992-97	1992-97
Net Interest Income	1.8	2.3	2.2
Non-Interest Income	0.4	0.5	1.4
Staff costs	0.8	1.1	0.8
Other costs	0.6	0.8	1.3
Costs/total income	65	67	60
Operating profits	0.8	0.9	1.4
Provisions and exceptionals	0.3	0.3	0.4
Pre-tax profits	0.5	0.6	1.0

but four years out of the last 25 the return on assets of the banking system in the UK was higher than in Germany.[7]

Unlike British banks, German banks still maintain hidden reserves. It is important to consider how, and to what extent, this practice distorts the published picture. Rather as British banks did before the Second World War, German banks use these reserves to smooth fluctuations in profits. It is said by those aware of the true picture that although these reserves may affect profits for several years in a row at an individual bank they do not influence the trend level of operating profits for the banking system as a whole, and that they are not of a size sufficient to smooth volatility of the size shown in Britain to the level reported in Germany.[8]

Table 5 summarises the sources of bank income in the two countries. Using Bundesbank data we obtain the figures for all German banks shown in the first column of the table. However, it is probably not appropriate to compare these figures with statistics for the UK banking system, because they include the costs and income of the Landesbanks and mortgage banks which, for special reasons, operate with extremely low interest margins and costs in relation to assets.[9] We therefore compare, in the final two columns of this table, UK banks with German banks excluding the Landesbanks and mortgage banks. Note that we have not made the same adjustment to the data shown in Chart 1; however, since such an adjustment would increase German bank profits as a share of assets by around only 0.1 per cent the conclusions we draw from the chart are unaffected.

The comparison of UK major banks and building societies with German banks (excluding the landesbanks and mortgage banks) suggests that German and UK banks have similar levels of interest income, as a proportion of total assets, but that there is a substantial difference in both non-interest income and costs.

Staff costs are higher in Germany, reflecting in part higher social security costs and the much higher number of branches per head of population. In 1994 there were 5,272 people for every bank branch in the UK compared with only 1,832 per branch in Germany.[10] More of a puzzle is the fact that both non-interest income and non-staff costs are higher in the UK than in Germany. Much of the non-interest income of UK banks is fees and commissions on their purely domestic banking activities. One possible explanation of these differences is that UK banks have gone a great deal further than German banks in introducing new products and information-based banking services (eg telephone banking); and that they also sell

more non-bank products to their customer base. In Germany, the supply of retail banking services is dominated by state-supported and mutual institutions — the savings banks and credit co-operatives — which have relatively little incentive to substitute electronic forms of delivery for branches. Supplying a greater range of services and products involves higher non-staff costs but may produce more than proportionately higher non-interest income, thus raising profits in relation to assets.

During the 1990s, provisions and exceptional items have been very similar shares of banking assets in the two countries. The higher level of non-interest income and the lower staff costs (which more than compensate for higher non-staff costs) are the main explanation of why UK banks produce a higher average level of profits than do German banks.

Determinants of bank performance

Output fluctuations

What explains the greater variability of banking sector profits in Britain than in Germany? The behaviour of real GDP cannot explain the greater variability in the UK; for over the past 40 years fluctuations in real GDP were very similar in the two countries.

Chart 2 compares the annual growth of output in the two countries from 1961 onwards. The average growth rate in Germany has exceeded that of the UK, but fluc-

Chart 2 Growth rates of GDP

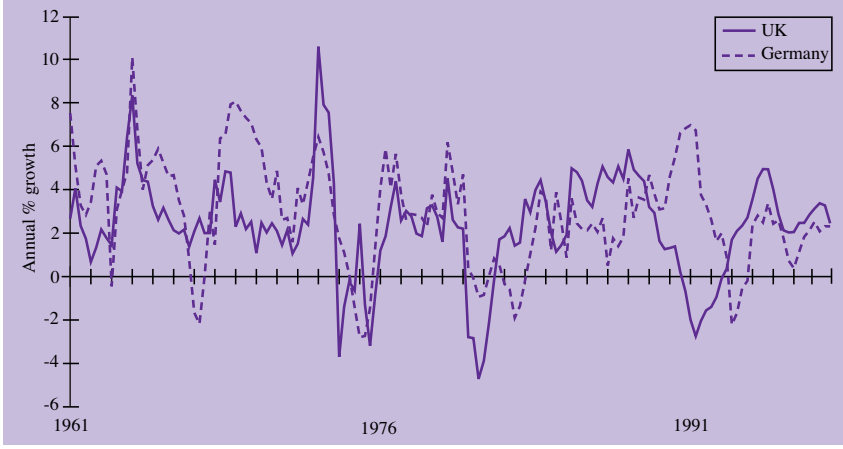


Chart 3 Inflation (consumer expenditure deflator)

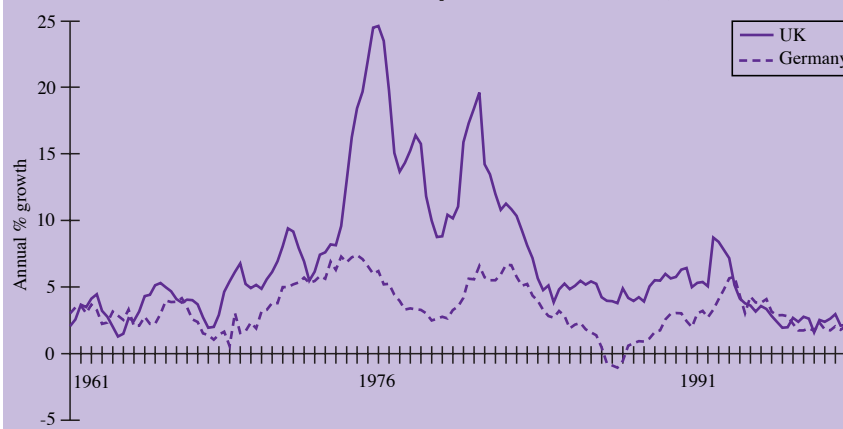
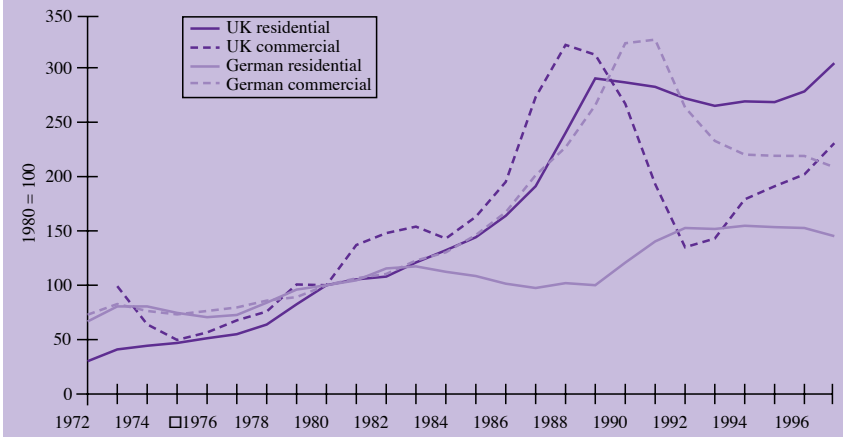


Chart 4 Property prices: nominal price indices



Source: Jones Lang Wootton, BIS.

tuations in growth rates, and the depth and duration of recessionary episodes, have been similar. Nor indeed are the fluctuations in growth rates closely associated with bank performance. One of the most severe recessions in both countries was between 1980 and 1982, but this was far from the period of weakest bank performance. We conclude that in neither country were the fluctuations in real aggregate output sufficient on their own to trigger substantial financial difficulties.[11]

Inflation

Nominal macroeconomic instability appears to be more relevant for banking performance. A major difference between the economic performance of the two countries, at least until recently, has been the higher and more variable rate of inflation in the UK (Chart 3). Using the consumer expenditure deflator measure, German inflation has never exceeded 8 per cent per annum in the post war years and has averaged less than 4 per cent per annum since the beginning of the 1960s. UK inflation reached 25 per cent in 1974 and 20 per cent in 1980, and was well over 10 per cent per annum, on average, in the 1970s and over 5 per cent in the 1980s. Only since 1992 has the UK inflation rate fallen back to levels close to those witnessed in Germany.

High and variable inflation has a major impact on bank earnings. Unexpected increases in inflation and consequently in interest rates cause cash flow difficulties for borrowers. These can lead to premature termination of loan arrangements and thus precipitate loan losses. Further, it appears that high and variable inflation encourages bank-financed investment in property markets, an investment strategy which can be profitable as long as control over inflation remains weak but can lead to substantial losses if monetary policy is tightened and the inflation rate falls, for property is often used as loan collateral.

A major difference between the economic performance of the two countries, at least until recently, has been the higher and more variable rate of inflation in the UK

Asset prices and new entry

Chart 4 shows German and UK property prices in money terms. Since the early 1970s, commercial property prices in both countries experienced big falls — UK prices fell by 50 per cent between 1988 and 1992 while German prices fell by around 30 per cent between 1991 and 1994. The impacts on the two banking systems were, however, rather different. In the UK the price collapse contributed to the sharp deterioration in banking sector performance in the early 1990s, but in Germany there seems to have been no significant impact.

This may in part reflect the more cautious lending policy and lower loan to value ratios of German banks. But more relevant to bank performance may have been a tendency for pfandebriefe mortgage lending arrangements to discourage high loan to value ratios. This can help explain the stability of German bank earnings in the 1970s and 1980s. This is not, however, an

entirely satisfactory explanation. Why have German banks not made greater use of non-pfandebriefe sources of finance to increase loan to value ratios and loan to income ratios? In the 1990s there has been increasing competition for mortgage business in Germany, but this has not yet led to a rapid build up of personal debt/income on a scale such as occurred in the UK in the late 1980s. The different arrangements for financing property-related lending do not appear to be a fundamental explanation of the greater variability of UK bank performance. Rather our interpretation is that the much greater aggressiveness of UK banks in property-related lending was a conscious strategy; and that German banks had the freedom to be similarly aggressive in lending to property markets, but chose not to be so.

New entry and increased competition in these markets has played a greater role in the UK than in Germany. One source of increased competition is entry by foreign banks into domestic banking markets. Table 4 highlights the much greater relative importance of foreign banks in the UK than in Germany. The large number of foreign banks in London came originally to undertake investment and international banking. Having incurred the costs of establishing a presence, a natural step was to branch out into corporate and local authority lending. Foreign banks (including German banks) have also conducted a significant share of commercial property lending in the UK in the past decade.

Competition has also increased amongst UK institutions with, for example, building societies exploiting the new powers offered to them by the 1986 Building Society Act and engaging in lending secured on commercial property, and banks entering residential mortgage markets from the beginning of the 1980s.[12]

The greater impact of property price fluctuations in the UK may have been produced by the combination of a recession in which income fell, leading to inability to maintain loan repayments, together with a fall in nominal property prices. The latter meant that when banks took possession of and sold properties with the aim of recouping their loans, the proceeds from property sales did not cover the original sums lent.[13]

The greater impact of property price fluctuations may have been produced by the combination of a recession, leading to inability to maintain loan repayments, together with a fall in nominal property prices

In both countries the nominal price of residential property shows relatively small declines of around 10 per cent in value (this happened in the UK in the early 1990s and in Germany in the mid-1980s). Losses on residential mortgage lending did not contribute very substantially to UK bank loan loss provisions. Nonetheless, declines in residential property prices did have an impact on bank loan performance in the UK, because of the practice of securing small business loans on residential property. A large proportion of UK bank loan losses in 1992-94 were on small business

related lending.[14] The extent of these losses was greatly increased by the sharp decline in residential house prices in the south-east of the country.[15]

This mechanism — the experience of high and uncertain inflation and the resulting instability of residential and commercial property prices — thus seems central in explaining the level of bank losses experienced in the UK during the early 1990s. An implication is that now that control over UK inflation has been much more firmly established than in the past and has been made the explicit target of the Bank of England, property prices and UK bank earnings are likely to be more stable than in recent years.[16]

Risk taking

High and variable rates of inflation, and new entry, seem to go a long way towards explaining the greater variability of UK banking profits, but several other factors may have had an impact. One further possible cause of poor bank performance is a major failure of risk management, especially in relation to a relatively new area of business. This was most notably the case in relation to UK bank losses on LDC lending, which was originally extended during the 1970s.

Repayment difficulties on these loans emerged in 1982, and provisions for loan losses were eventually made in 1987 and 1989. A major cause of these losses was a failure adequately to assess the risks on this lending. Subsequently UK banks have been much more cautious about lending to emerging markets.

In the past, competition for business generally, not just in the property sector, may have been lower in Germany than in the UK. State-owned and co-operative institutions are much more important in the German banking market. The savings banks, the Landesbanks and a large proportion of specialised lending institutions are state-owned. They account for over 40 per cent of German banking assets, and since the German co-operative sector accounts for a further 14 per cent of banking assets (see Table 4), less than half of bank assets are held by private institutions (the commercial, regional, and mortgage banks).

Private sector firms are likely to be reluctant to enter a market dominated by state-owned enterprises, which may have access to capital raised by exploiting a sovereign risk rating, and certainly an owner with a wider range of sources of funds than do private sector firms.

Summary and conclusions

In this paper we have compared the UK and German banking systems with a view to understanding why banking performance has differed between the two countries. In particular we have sought to investigate those features that have reduced the level and volatility of bank profits in Germany relative to those of the UK.

Cross-country comparisons indicate that most episodes of large scale, or systemic, banking sector problems have been associated with preceding periods of financial liberalisation, loose monetary policy, and unsustainable rises in property prices.

The contrast between the UK and Germany is illuminating because at least one of these pre-conditions, a full liberalisation of interest rates setting and removal of most institutional barriers restricting competition between different banking markets, has been present in both countries. However, there have been substantial differences between the two countries both in the structure of their banking systems and, at least until recently, in the conduct of their monetary policy.

Although the two banking systems are very different, the risk of bank losses leading to a wider financial crisis has been low in both the UK and Germany. UK banks have had sufficient profits to absorb even their worst experience of loan losses in the early 1990s, and there seems (even after making allowance for the practice of maintaining hidden reserves) to have been less variability of profits in Germany than the UK.

We observed a strong correlation between credit and asset prices, especially in the UK and particularly since the early 1980s. The level and growth rates of both the credit/GDP ratio and real asset prices have been more volatile in the UK than in Germany, with the UK exhibiting particularly marked

falls in property prices. Property prices, especially commercial property prices, played a major role in triggering the bank losses that were experienced in the UK in the early 1970s and again in the early 1990s.

Why did these differences in rates of growth of bank credit and in the volatility of commercial property prices occur?

First and most important has been the tight control over inflation exerted by German monetary policy. Higher and much more variable past rates of inflation seem to have been the main reason for past fluctuations in UK property markets and the more variable growth of total bank credit.

Also important have been structural differences between UK and German banking markets, especially the fact that state-owned and co-operative banks (which pursued very conservative policies throughout most of the period covered by this paper) account for over half of German banking assets, and that a substantial part of property lending is, in effect, off balance-sheet in Germany.

What lessons can be drawn for the future? In the UK an important lesson has been learned and acted on. In the 1990s there was a shift to a more disciplined monetary policy stance than in the previous two decades. Monetary discipline and the credibility of monetary policy have been further reinforced by the operational independence given to the Bank of England.

It is clear that price stability — the avoidance of inflation and deflation — is the foundation of a stable banking system

The UK has now succeeded in establishing a relatively low and stable rate of inflation. Our analysis suggests that if this performance is maintained, the risks of bank losses are considerably less than in the past. In any event, the UK banking sector continues to earn high levels of profits which would serve as a substantial cushion against any future loan losses.

There is some evidence in recent years that competition is increasing in the German domestic banking sector, while German banks have become more aggressive in lending abroad.

Lending by German banks to emerging markets has grown much faster than that by UK (or Japanese and US) banks since the early 1990s. This increase in risk-taking has involved an increase in bad loans, particularly those arising from the recent east Asian and Russian crises.

With further increases in competition likely, the question that the German banking system faces is whether a higher average level of profits will adequately compensate for an expected increase in profit variability.

But all that said, it is clear that price stability — the avoidance of inflation and deflation — is the foundation of a stable banking system.

The continuation of such a benign climate in Britain and in Germany should be a major safeguard against banking sector problems in both countries.■

Annex A: Summary of financial liberalisation and deregulation

United Kingdom

1971	Competition and credit control: abolition of direct credit controls applying to banks. The interest rate cartel of London clearing banks and Scottish banks dismantled at official request (Recommended Interest Rate System of building societies continued). However, lending guidance continued to be practised through the 1970s and into the early 1980s, and was not formally withdrawn until January 1987.
1973-80	Restrictions on interest-bearing eligible liabilities of banks working as indirect restrictions on credit expansion ("corset"): first introduced in December 1973, suspended in February 1975, reintroduced in November 1976, suspended in August 1977, re-introduced in June 1978 and finally abolished in June 1980.
1976 to 1987	The Trustee Savings Bank Act starts the reorganisation of the trustee savings banks movement (which culminates in the 1987 privatisation of the Trustee Savings Bank in 1987 and thus in the institution's full integration with the banking sector).
1979	Abolition of exchange controls in October 1979.
Early 1980s	Cash management services introduced. TAM sharing arrangements among groups of banks. Interest-bearing current accounts introduced (often as part of financial services packages).
1982	Acquisition by a large clearing bank of a nation-wide chain of estate agents.
1983	Nationwide announcement that the clearing banks intend to develop a national system for Electronic Fund Transfer at the Point of Sale.
1983-84	As part of moves towards dual capacity on the Stock Exchange (ie securities firms being allowed to act as both brokers and jobbers), large banks form shareholding links with Stock Exchange firms.
1984	Recommended Interest Rate System of building societies discontinued.
1986	Stock exchange "Big Bang" abolishes fixed minimum commissions and single capacity trading.
Jan 1987	The 1986 Building Society Act came into effect, widening the scope for commercial lending, allowing societies to provide other services relating to house purchase and finance, and allowing societies (from 1988) to operate in the EEC. The Act also made provision for societies to convert from mutual to corporate status (also from 1988), and created the Building Societies Commission to supervise the societies.
1989	Abbey National Building Society converts into a bank.
1995	Cheltenham and Gloucester acquired by Lloyds; Lloyds and TSB merge.
1996	National and Provincial Building Society acquired by Abbey National.
1997	Halifax, Woolwich, Alliance & Leicester and Northern Rock Building Societies convert into banks; Bristol and West acquired by the Bank of Ireland.

Germany

March 1965	Official agreement on bank lending and deposit rates replaced by Interest Rate Decree ("Zinsabkommen") deregulating interest rates on long-term bank loans (maturities of four years and over) and longer-term deposits (maturities of two years and over).
April 1967	Abolition of Interest Rate Decree ie full deregulation of bank lending and deposit rates.

Since early 1970s	Introduction of "Eurocheque" (guaranteed cheque). Strong expansion of lending to the government sector (Federal Government, Federal Railways, Federal Post Office Authorities, Länder) against promissory notes ("Schuldscheindarlehen"). Strong expansion of mortgage lending. Fixed-interest medium-term lending to enterprises. Diversification of savings instruments (saving with premium, savings plans, savings accounts with bond-market related interest rates etc). Strong promotion of sale of investment fund certificates and related fund management. Introduction of common credit card (Eurocard) (1977). Since early 1980s gradual introduction of automated payment facilities (ATMs, EFT methods). Further development of introduction of the following activities/instruments: - leasing, factoring, venture capital, cash management programmes, management consultancy business; - issue of new types of DM bonds for domestic and foreign issuers (zero-coupon bonds, floating rate notes, dual currency bonds, and bonds linked to interest rate and foreign currency swaps on own or customer account (authorised in 1985); - the outstanding volume of negotiable DM certificates of deposit, though authorised since May 1986, is practically nil due to the incidence of the securities turnover tax.
1989	Amendment to Stock Exchange Act - authorisation of listing of securities in foreign currencies and in electronic stock exchange dealings. Foreign branches permitted as lead manager of DM bond issues.
1993	Creation of Deutsche Borse
1994	Money market funds authorised Remaining restrictions on commercial bank activities: - insurance underwriting business (insurance brokerage business is allowed); - own issues of mortgage bonds and communal bonds (subject to special law); - building society ("Bausparkassen") business (subject to special law); - issues of foreign-currency bonds on own account (restrictive authorisation practice of the Bundesbank); however, there are no restrictions for those foreign-currency issues which are offered by a syndicate composed of non-resident banks only.

Annex B: The German pfandebriefe market

German banks conduct much of their property-related lending through the issue of pfandebriefe bonds, matching the maturity and interest rate structure of these assets and liabilities and effectively taking risks off-balance sheet.[17] Pfandebriefe accounted for some 37 per cent of total bond issue in Germany in December 1996.[18] Of these around one third financed mortgage loans (for owner occupation, residential letting and commercial property) and the remainder public sector loans.

The issue of pfandebriefe is strictly regulated, under legislation originally passed in 1900 (for mortgage bonds or hypothekenpfandebriefe) and in 1927 (for public sector bonds or oeffentliche pfandebriefe). Mortgage bond issue is only possible for the 24 mortgage banks restricted to mortgage business alone and to the three mixed mortgage banks (classified as regional commercial banks in the

Bundesbank statistics) permitted to engage in universal banking activities. Hypothekenpfandebriefe are used extensively to finance commercial as well as residential property (mortgage and regional banks hold about two-fifths of German commercial property loans). While mortgage bonds may be issued only up to 60 per cent of property value, successive legislative amendments since 1968 have given lenders freedom to engage in additional non-pfandebriefe mortgage lending. Total financing packages now typically embody loan to value ratios well in excess of 60 per cent.

Public sector bonds are issued by the publicly-owned Landesbanks, other public law financial institutions such as municipal enterprises, and also by the mortgage banks and mixed mortgage banks. The legal framework allows the use of pfandebriefe to finance the acquisition of EU public sector debt. In practice they are primarily used for the purchase of the debt of the Länder and the communes. For both types of bond, collateralisation is aggregated ie all the pfandebriefe mortgage assets of a bank act as collateral for its entire mortgage bond issue and all the pfandebriefe public sector assets act as collateral for its entire public sector bond issue. A system of registration is used to monitor this collateral. This collateralisation and the legislative framework provides strong protection to pfandebriefe holders, in the event of an insolvency, and allows the pfandebriefe to be given credit ratings which are often stronger than those of the issuing institutions.

Notes

* We are indebted to Clive Briault, Dr Otmar Issing, Professor Harold James, and Dr Anna J Schwartz for comments on an earlier draft.

1 M Hellwig (1996) 'Financial Innovations and the Incidence of Risk in the Financial System,' in 'Risk Management in Volatile Financial Markets,' F Bruni, D E Fair and R O'Brien (eds).

2 C J Lindgren, G Garcia and M I Saul (1996) 'Bank Soundness and Macroeconomic Policy,' International Monetary Fund.

3 G Kaminsky, S Lizondo and C Reinhart (1998) 'Leading Indicators of Currency Crises,' IMF Staff Papers, Volume 45, March.

4 In addition, they found two external factors important - an appreciation of the real exchange relative to trend and a decline in the growth of export volumes.

5 These crises have also directed attention to banking supervision, particularly as a means of preventing systemic crises. Because this paper examines only crises that happened, rather than ones which might have but did not, we do not attempt to assess the effectiveness of supervision as a stabiliser.

6 See A Prati and G J Schinasi (1997) 'European Monetary Union and International Capital Markets: Structural Implications and Risks', IMF Working Paper 97/62.

7 The higher rate of inflation, and therefore, nominal interest rates in the UK than Germany during the 1970s and 1980s partly explain the difference in income in the two banking systems during this period. The contribution to income and profits of non-interest bearing liabilities increases with the general level of nominal interest rates (the endowment effect).

8 It is also worth noting that there is a substantial tax disincentive to the use of one category of hidden reserves for smoothing reported profits. Some assets are booked at cost of acquisition rather than their current valuation, thus implying a substantial reserve cushion. But those "undervalued" assets cannot be realised without triggering a capital gains tax liability, at a tax rate of 60 per cent.

9 The Landesbanks obtain most of their finance from savings banks and thus avoid the costs of collecting retail deposits. Their interest margins are narrow because their assets consist mostly of low risk public sector loans, and because the Landesbanks are themselves guaranteed by the Länder. The German mortgage banks operate with low costs, since they raise much of their finance through the issue of Pfandbriefe bonds, again avoiding the need to collect retail deposits, and with narrow spreads, since the rules of the Pfandebriefe market require high levels of collateral on mortgage lending and transfer remaining risk onto bond holders. The Pfandebriefe market is described in Annex B.

10 See A Prati and G J Schinasi (1997) op cit.

11 It is worth noting that interest rate spreads in Germany appear to be counter-cyclical, and that banks' cost of funding declines as the economy slows.

12 Prior to 1986, building societies could lend only on residential property; after 1986 they could hold a proportion of assets secured against commercial property.

13 The lower loan to value and loan to income ratios prevalent in Germany would have made that system less susceptible to this kind of problem had such a cycle occurred there.

14 Barclays Bank acknowledged losses on small business lending of more than £1 million per week during the worst part of the recession in the early 1990s.

15 Residential property prices in the south-east of the UK fell by nearly 40 per cent between 1989 and 1993.

16 The use of pfandebriefe bonds has allowed German mortgage banks to avoid any mismatching of interest rates, such as triggered the US savings and loans crisis in the 1980s. But interest rate risk does not explain the greater variability of UK bank profits. In the UK, mortgage lending is typically conducted at short-term variable rates of interest, so UK mortgage lenders are also protected from any flattening of the yield curve. UK commercial property lending is also either conducted at floating rates of interest or with some other financing arrangement that hedges the lending institution against interest rate risk. Neither system of finance has the exposure to interest rate risk which generated problems on the scale which arose amongst the US Savings and Loans.

17 For a description of the Pfandebriefe market we have relied on a briefing paper: "Banks Ratings Criteria: Criteria for Rating German Pfandebriefe", Standard and Poor's Bank Rating Service NY, July 1997.

18 A further 33 per cent of total bond issue were government bonds with the remainder issued by bank and private sector institutions.

SOME ISSUES FOR POLICY MAKERS ARISING FROM THE INTERNATIONAL FINANCIAL CRISIS

by John Drage, Fiona Mann and Ian Michael, Bank of England

While many possible causes of the Asian crisis — and the more recent Russian default and the subsequent virtual closing of international capital markets to many developing countries — have been advanced and widely discussed by policy makers, in academic literature and press reports, the crisis is still evolving and it is unwise to think that all the lessons that may need to be learned have already been identified.

To a large extent the current financial crisis originated in national economic policy mistakes in a number of Asian countries, which were compounded by a destabilising lack of transparency. It grew because of the poorly regulated and often distorted financial sectors in these countries. It subsequently became global as investors and lenders became more risk adverse.

While the causes of the crisis and its spread are, of course, more complex than suggested by the brief summary in the preceding paragraph[1], the crisis has already highlighted a number of weaknesses in the international financial system, and active discussions have been underway between policy makers for some months in a number of fora[2] about ways to improve the system's stability. Indeed, strengthening the "architecture" of the international financial system was one of the main subjects considered at the recent series of international meetings in Washington.[3]

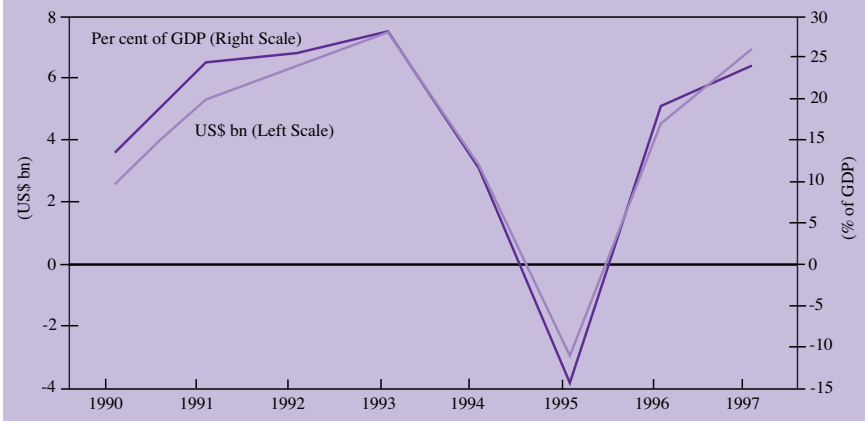
This article attempts to summarise some of the key aspects of the ongoing debate and to catalogue a series of measures, which, if implemented in the coming months and years, could make a contribution to improving the stability of the international financial system. These are grouped under the following five main headings:

- the volatility of capital flows;
- issues arising in the banking sector in debtor and creditor countries;
- the need for rapid re-organisation of the corporate sector when it is significantly damaged by a crisis;
- developing and implementing internationally accepted standards for a range of key subjects, including the collection and publication of economic and financial data, fiscal and monetary policy transparency, banking supervision, securities regulation, auditing, accounting and corporate governance; and
- involving the private sector in resolving financial crises.

Volatility of capital flows

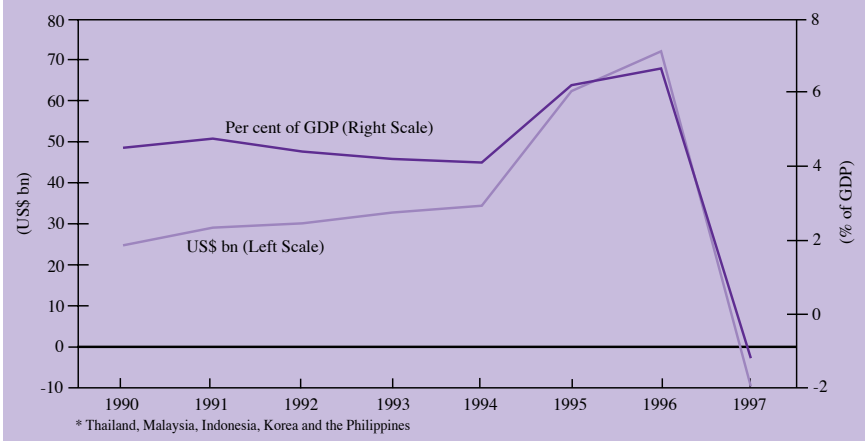
Both the Mexican crisis of 1994/5 and the Asian crises were preceded by rapid increases in capital inflows (Charts 1 and 2). However, inflows into Mexico were dominated by portfolio flows, while those to Asia

Chart 1 **Private capital flows into Mexico prior to the Mexican crisis**



Source: International Capital Markets Report September 1998

Chart 2 **Private capital flows into selected* Asian countries prior to the Asian crisis**



* Thailand, Malaysia, Indonesia, Korea and the Philippines

Source: International Capital Markets Report September 1998

were dominated by bank lending flows (Charts 3 and 4). The reversals of capital flows in each case reflected these patterns: in the case of Mexico, there was a change in portfolio flows from a peak net inflow of $23bn in 1993 to a net outflow of $14bn in 1995, a swing of $37bn, equivalent to 13 per cent of GDP. For the five most affected Asian countries in the current crisis — Indonesia, Korea, Malaysia, the Philippines and Thailand — there was a change in bank lending (largely in short-term interbank lines) from a net inflow of $40bn in 1996 to a net outflow of over $30bn in the latter part of 1997, a swing of $70bn (equivalent to 7 per cent of GDP). However, the total reversal in the flow of capital may have been significantly larger. Some estimates of capital flight — based on changes in the errors and omissions line in balance of payments data — suggest a further outflow of $20bn for the most affected countries during 1997.

Policy makers therefore had to deal with large and sudden switches in capital flows, and it is likely that volatility of these magnitudes would have an adverse impact on any economy. Policy makers are, as a result, confronted with two main questions.

(i) What are the appropriate policies for handling such dramatic volatility?

(ii) What can be done to reduce the volatility of capital flows in the future?

Coping with volatility

The first pre-requisite is for the authorities to be aware of the magnitude of foreign currency liabilities being accumulated in the economy, and the second is to be able to take policy actions based on that information. One of the factors that turned the problems in a number of Asian countries into full-blown crises was the scale of their short-term foreign currency liabilities, relative to the available liquid foreign exchange assets.

In a number of countries, when the crisis broke, the authorities spent considerable time and effort on compiling a complete picture of the country's foreign currency liabilities. Without these data — or, at a minimum, data in respect of the public sector and the banking system — a country cannot manage its foreign currency liabilities, in relation to net available official

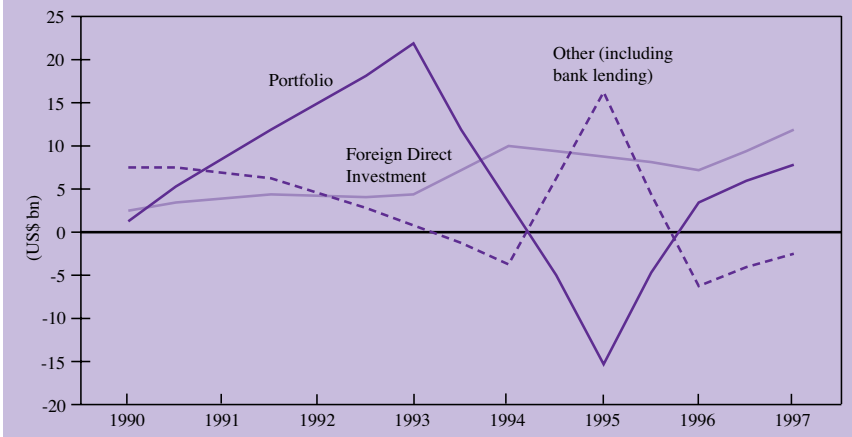
reserves (appropriately defined and measured). If a country's authorities fail to manage their country's overall foreign exchange position then they are failing to contribute to accident prevention, either with respect to the country's own interests or those of the international financial system.

In addition, if these data were to be published, they should — through market discipline — help potential lenders and investors make more informed risk assessments, which could in themselves help to prevent a build up of excessive short-term liabilities.

Most emerging markets that have experienced heavy capital inflows have taken macroeconomic policy actions to try to limit the impact of those flows on their economies. In those countries that were trying to maintain currency pegs (eg Thailand, Korea and Indonesia), the initial policy response to large-scale inflows has typically been to intervene in an attempt to reduce pressure on the nominal exchange rate, while sterilisation has been used to offset the monetary expansion that can result from intervention.

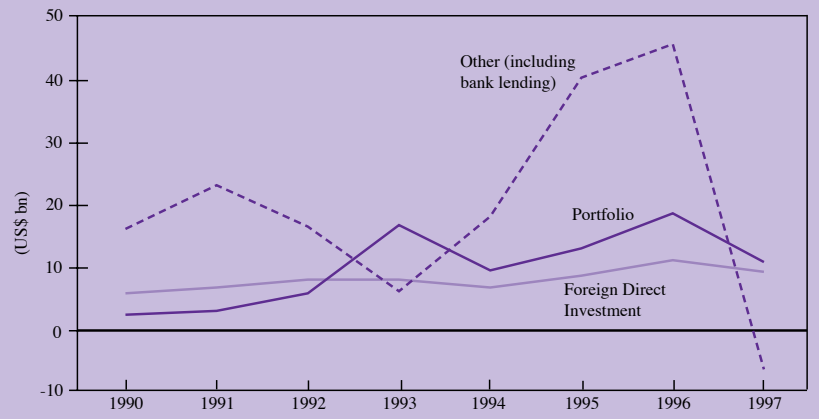
However, short-term interest rates tended to increase as a result of sterilisation, so encouraging further inflows. So there are doubts about the effectiveness of sterilisation as a policy response to capital inflows. Another approach is to allow the exchange rate to respond to the pressures created by capital inflows by either a revaluation or by an appreciation of the exchange rate.

Chart 3 Composition of private capital flows into Mexico prior to the Mexican crisis



Source: International Capital Markets Report September 1998

Chart 4 Composition of private capital flows into selected* Asian countries prior to the Asian crisis



* Thailand, Malaysia, Indonesia, Korea and the Philippines

Source: International Capital Markets Report September 1998

In particular, an appreciation helps to insulate the domestic money supply from the expansionary effects of capital inflows, so that, if economic fundamentals warrant a real exchange rate appreciation, the adjustment can come via the exchange rate rather than via higher inflation. A further advantage of having a freely fluctuating rate is that it introduces uncertainty about the future level of the exchange rate, which can be helpful in discouraging short-term speculative flows. However, where hedging instruments are not readily available, exchange rate flexibility may also deter medium-term capital inflows, including foreign direct investment, in addition to deterring export growth. Another disadvantage of adopting a floating rate is

that a heavy capital inflow could induce an abrupt and large real exchange rate appreciation, which could impose substantial adjustment costs on a country's economy, especially its traded goods sector.

A complementary response to dealing with large capital inflows may be to tighten fiscal policy so as to reduce the upward pressure on aggregate demand and thereby limit the inflationary impact of the inflows.

What can be done to reduce the volatility of capital flows?

A number of countries have introduced a variety of prudential measures in an attempt to reduce the volatility of capital flows (eg Mexico imposes caps on banks' foreign currency liabilities and Chile imposes a 20 per cent limit on the open foreign exchange position set in relation to banks' capital and reserves). In particular, prudential measures that limit the size of the foreign exchange and maturity mismatches run by banks in debtor countries could play a role in limiting the rapid accumulation of short-term foreign currency liabilities in the banking system.

The problems caused by large-scale inflows and their sharp reversal have led a number of countries to re-examine the use of capital controls. Traditionally — and as recently introduced by Malaysia — capital controls have been used as a vehicle for limiting the volume of capital outflows.

Such controls not only have a tendency to lead to black markets, but they also tend to cut countries off from capital inflows.

Furthermore, any discussion of outward controls could encourage investors to remove their funds while they are still able to and thus cause an increase, rather than a reduction, in volatility. In addition, the unilateral imposition of outward controls — particularly in the current climate — through their effects on investor attitudes and confidence, could impose significant risks and costs on other countries.

However, the emphasis in the past few years in a number of countries has been on using controls to manage inflows by altering either the cost or scale of certain types of cross-border transactions. If controls on inflows are limited to short maturity instruments, investors/lenders may begin to use other instruments, such as equities or long-term bonds, to take short positions. Hence, some countries (eg Chile[4] in 1991 and Colombia in 1993) have required a proportion of all foreign currency inflows to be placed at the central bank in the form of a non-remunerated deposit. Since the taxes implicit in these deposit requirements fall more heavily on investors with a short time horizon, their purpose is clearly to deter speculative short-term flows. Studies conducted by the IMF in the wake of the Mexican crisis (May 1995 World Economic Outlook) suggest that, at least in the short term, such policies appear to be successful in reducing

If a country's authorities fail to manage their country's overall foreign exchange position then they are failing to contribute to accident prevention, either with respect to the country's own interests or those of the international financial system

the volume of inflows. They have also contributed to transforming the maturity of inflows.

Issues arising in the banking sector

Financial sector fragility, and especially banking sector weakness, have been recognised as key contributory factors to both the Asian and Russian crises. There were various aspects to this: first, rapid credit expansion by the banking sector in the indebted countries fuelled asset prices and permitted corporates to take on excessive levels of gearing; second, inadequate auditing, accounting and supervision in the banking sector of Asian countries helped to mask the underlying problems and hence contributed to the very sharp reversal of market sentiment once the underlying weakness of bank balance sheets was (belatedly) realised; and third, the structure of the liabilities of the banks and some of their domestic clients — large amounts of short-term unhedged foreign currency debts — made these economies highly vulnerable both to a currency devaluation and to a sudden withdrawal of external funding.

Bank credit to the private sector in a number of Asian countries grew at rapid rates during the 1990s — averaging between 12 per cent and 18 per cent annually in real terms. This followed a decade of equally rapid expansion in the 1980s. Risk-management techniques and expertise did not, however, keep pace with this expansion.

Inadequate auditing, accounting and supervision in the banking sector of Asian countries helped to mask the underlying problems and hence contributed to the very sharp reversal of market sentiment

Large exposures to particular sectors (especially property) were built up by banks in many countries, both in the form of direct lending and in the form of collateral. Over-concentration of lending to single borrowers was also a feature, as was excessive gearing up of capital by some corporate borrowers (in Korea industrial conglomerates built up ratios of debt to equity often in excess of 400 per cent).

Figures for international bank lending suggest that a significant part of the domestic credit expansion by Asian banks was funded by borrowing on the international interbank market. Net interbank borrowing by banks in the five most troubled Asian countries amounted to over $40bn annually during 1995 and most of 1996, three times the average annual rate in the early 1990s. Nearly all lending was denominated in foreign currencies and most of it had a maturity of less than one year.

The years of currency stability resulting from a pegged exchange rate may have contributed to the banks' lack of attention to the currency and maturity mismatch thus generated, although other factors also had an influence (eg high local currency interest rates, or local arrangements that had the effect of encouraging bank intermediation or foreign currency borrowing). In some cases, banks may have believed that they had

Banks may have believed that they had transmitted the currency risk to their domestic clients by denominating loans in foreign currency. But, in practice, the currency risk had been transformed into credit risk

transmitted the currency risk to their domestic clients by denominating loans in foreign currency (as they did in Indonesia, for example). This ignored the fact that, with generally no source of foreign currency earnings to repay these debts, the currency risk had simply been transformed into credit risk.

Finally, in some countries balance sheets had been weakened as a result of banks complying with earlier government policies of directed lending.

Strengthening banking systems in emerging market centres

The main banking sector reform issues for policy makers in debtor countries are evident from this catalogue of problems. As the deepening of the crisis revealed the volume of non-performing loans and the under capitalisation (or in some cases insolvency) of banks, various actions were taken. In Korea, an initial policy of forbearance (eg in the form of relaxed provisioning requirements) was replaced with measures that combine a liberalisation of ownership rules for banks with plans to strengthen bank management, transparency, accounting, auditing and supervision.

Similarly, IMF programmes in Thailand and Indonesia lay stress on financial sector restructuring, closure of unviable institutions, and improvements to the regulatory system. An important aspect of making supervision more effective will be the introduction of robust measures to control the size of open currency positions acquired by banks and the amount of maturity transformation they undertake, particularly in foreign currency.

Some thought has been given in the G-22 Working Group on Strengthening Financial Systems as to whether it might be appropriate to link access to major financial markets to standards of home country supervision, and perhaps soundness of financial sectors more broadly, in a tighter way than has applied up until now.

There may also be a role for the official sector in encouraging the private sector to develop collective mechanisms to look more closely at the infrastructure of national financial systems when assessing the risks of lending to particular countries or institutions. Finally, it is possible that IMF conditionality could be used more than in the past in order to encourage progress towards strong financial sectors.

Issues for banks in creditor countries

One consequence of the crisis has been that international bank creditors have been forced to roll over short-term credits and establish varying levels of provisions. Whilst levels of exposure and provisions are generally not high relative to overall capital, the episode nevertheless raises the question of whether there are issues that need to be addressed by the major creditor banks and their supervisors. These include:

- the adequacy of credit risk assessment by lending banks. It

is not clear that banks consistently asked themselves whether borrowers could generate foreign currency to repay debts: it has also been suggested that some creditors operated on the assumption that bank debts would be underwritten by governments; even in the absence of reliable figures on net official reserves, the rapid growth of banking sector liabilities in these countries, as evidenced in BIS figures, might have led banks to question this assumption;

- the need to supplement measures of value at risk in VaR market risk models with stress testing. VaR models would be liable to mis-state risk in an environment where exchange rates are subject to infrequent, but very sharp, changes. The crisis has also highlighted the vulnerability of assumptions about correlations across markets;
- the adequacy of the concept of "country risk". Banks have had to refine their way of looking at country risk to incorporate private sector debt into their assessment of a country's ability to repay. (There are also, of course, lessons about the adequacy of information on private sector external debt, as discussed elsewhere);
- the merits of setting a code of best practice in respect of the information a lending organisation should seek to obtain from a prospective borrower, prior to reaching decisions on whether to grant a facility and determining the size and price of any facility.

In addition, the substantial build up of short-term debt has focused attention on the Basle Capital Accord's risk weightings and their alignment, or lack of alignment, with risk. The Accord weights all foreign currency interbank credits of less than one year at 20 per cent (compared with 100 per cent on longer-term interbank loans to Zone B[5] credit institutions). Since most interbank lending tends to be short-term anyway, regardless of the destination, it is not clear to what extent the risk-weighting has had a distortionary effect on the maturity of interbank lending.

Nevertheless, the 20 per cent weighting may well have had some influence on the total volume of lending. If less short-term bank finance had been available, or had been priced more stringently, borrowers might have been forced to seek alternative non-bank sources of funds, or countries might have been forced to make an earlier and more rapid adjustment of their current account deficits.

Hence, there is a need for the authorities to consider whether this 20 per cent risk-weighting adequately captures the relative risk in cases where borrowing banks may be neither effectively supervised nor effectively backed — on their foreign currency claims — by central bank liquidity.

The episode raises questions about the adequacy of credit risk assessment by lending banks including the efficiency of VaR models

Restructuring the corporate sector

A major issue in the Asian crisis has been the number of non-financial corporations that have become insolvent because of large unhedged foreign currency liabilities.

In Korea, this reflected the use of short-term external funds raised by domestic banks to finance long-term corporate investments, while in Indonesia, and to some extent in Thailand, it reflected direct access by local firms to the eurobond market and international syndicated lending.

The build up of foreign currency liabilities in the non-financial corporate sector in part probably reflected the desire of a range of international investors to acquire claims on rapidly growing and profitable firms in countries that were thought to have sound fundamentals. But it also resulted from the incentives for borrowers created by higher nominal interest rates on domestic currency debt compared with interest rates on similar products in the major currencies. These large interest-rate differentials resulted from the fact that a number of Asian countries used pegged or managed exchange rates supported by relatively tight domestic monetary conditions. These conditions created a strong incentive to borrow externally, particularly when firms regarded their governments' ability to maintain their pegs as credible.

When the authorities were unable to sustain the pegged exchange rates, the needs of firms with unhedged foreign currency liabilities to cover their open positions were a significant factor in driving down the exchange rate, but the lower the rate the fewer the number of firms that remained solvent. Hence, there is a need to reduce the incentives for corporates to take unhedged foreign currency debt positions. One way to achieve this may be to have greater exchange rate flexibility.

When the authorities were unable to sustain the pegged exchange rates, the needs of firms with unhedged foreign currency liabilities to cover their open positions were a significant factor in driving down the exchange rate. This made even more firms insolvent

Corporate governance

In addition to the currency mismatch problem, the crisis raises a number of other corporate governance and disclosure issues. Making more information available to shareholders, creditors and other market participants about the financial position and performance of firms should increase market discipline on the managers of firms and lead to better management of the risks associated with incurring foreign currency debt. (The lack of such information raises the question why did investors lend? Perhaps they did so in the belief that the Asian "miracle" would last indefinitely and that they were protected by implicit sovereign guarantees.)

Bankruptcy procedures

Another issue highlighted by the crisis is the importance of having an efficient bankruptcy procedure. Without this, it is very difficult to get debtors and creditors to come together and agree restructuring terms. By facilitating restructuring and exit, insolvency regimes help limit the extent to which corporate financial difficulties generate wide-

spread problems in the domestic financial system and provide an alternative to propping up insolvent firms with government support.

There is increasing evidence that, once a major crisis has struck, coping with the debt overhang is an essential pre-requisite for breaking the downward spiral and restoring growth to a crisis-hit country.

Among the most important objectives of an insolvency regime are: maximising the *ex-post* value of the firm (whether it is liquidated or re-organised); providing for fair and predictable treatment of creditors when debtors are unable to meet their obligations fully; and facilitating commercial transactions by providing for an orderly, predictable system of liquidation.

Three key features of an effective bankruptcy regime are:

- a liquidation procedure that aims to maximise the value of the assets to be distributed to creditors. This is normally achieved by the imposition of a stay on the ability of creditors to enforce their rights against the debtor, followed by the appointment of an independent administrator whose duty is to maximise the value of the debtor's assets prior to liquidation;
- rules that provide for the rehabilitation of financially distressed but economically viable companies. When appropriately designed and implemented, such rules serve the interests of both debtor and creditors: providing an opportunity for a financially distressed company to restructure will enhance the value of creditor claims by providing "surplus value" derived from the operation of the debtor. One of the main issues in designing and implementing a bankruptcy system is to balance different objectives in such a manner that all interested parties have adequate incentives to participate actively in the process;
- an institutional framework that will ensure the rules are enforced in an equitable, predictable and timely manner. The key element in such an institutional framework is an independent and adequately trained judiciary that is insulated from capture by the special interests involved.

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Internationally-accepted standards

One of the weaknesses highlighted by the Asian crisis was a lack of transparency and accountability in a wide range of areas. This has given added impetus to the work that was already underway to develop sets of international standards on a number of key subject areas in a range of international bodies. The idea is that standards, once they have been developed and adopted, will facilitate both transparency and accountability, by providing an independent benchmark against which to compare actual practice.

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The areas for which standards have already either been developed or are under development are: first, the key macro-economic issues of data availability and fiscal and monetary policy transparency; second, financial supervision; and third, at the level of the firm, accounting, auditing and corporate governance.

The development of standards in these areas could bring benefits to both international borrowers and lenders. Accurate information, both qualitative and quantitative, should help investors to assess, and therefore price, risk more accurately, which in turn would improve the efficiency of the allocation of resources.

More transparency is likely to lead to a strengthening of market discipline and so reduce the incidence of national problems, as well as their spread to other countries. It should assist investors in assessing countries individually, as opposed to making assessments by regions or levels of development. This is vitally important in times of crisis to prevent a loss of confidence in one country spreading to other countries classified with the same label — the so-called contagion effect. The existence of standards that investors could use as benchmarks when assessing risk and making investment decisions would provide countries with an incentive — cheaper finance — to work towards meeting the standards. The amount of progress that has so far been made on developing standards varies between subject areas: the current state of play in respect of seven key subject areas is summarised in the Box.

Incentives for implementation

Reaching international agreements on standards aimed at strengthening the international financial system could, in practice, prove to be a time-consuming and relatively costly exercise, while the usefulness of standards will be limited unless they are both widely adopted and implemented. So it will be important to have incentives that will help to convince countries that adopting and implementing agreed international standards are in their own best interest. The most obvious method is through the pricing mechanism. If borrowers thought adherence to standards was a factor in lenders' pricing decisions, and a spread differential were to emerge between countries that had adopted and implemented the standards and those that had not, this would provide a powerful incentive to comply.

One possible way to encourage spread differentials would be for supervisors to impose higher capital adequacy ratios upon financial institutions that have significant exposures to countries or organisations that do not adhere to internationally agreed standards. Along the same lines, the rating agencies could be encouraged to incorporate adherence to standards into their rating decisions.

Adhering to the standards

For these market-based incentives to work, investors, supervisors and

Data dissemination

Following the complaints about data deficiencies in the wake of the Mexican crisis, the IMF developed the Special Data Dissemination Standard (SDDS). The SDDS prescribes the types of data that countries wishing to use the world's capital markets are expected to provide publicly, and lays down minimum benchmarks to be met in terms of coverage[1], periodicity and timeliness. In the light of the further data deficiencies highlighted by the Asian crisis, the IMF is working on improving the standard in respect of the reporting of data on foreign exchange reserves and external debt. The IMF maintains an SDDS Bulletin Board on the Internet[2] which posts information on the statistical practices of the 46 countries that have so far subscribed to the SDDS and, to date, "hyperlinks" have been established to 17 country Internet data sites (including the UK).

The IMF has also established the General Data Dissemination System (GDDS), which applies to all Fund member countries. It aims to improve the quality of data across the spectrum of the Fund's member countries. The focus on data quality is a recognition of the fact that, for many countries, improvements in quality are a necessary precursor to better dissemination of data to the public.

Code of Good Practice on Fiscal Transparency

This was developed by the IMF and endorsed by its Interim Committee in April 1998. It is a voluntary code that aims to improve the accountability and credibility of fiscal policy as a key component of good governance. The rationale for the Code is that providing better information to the public will make governments more accountable and thereby strengthen the credibility and public understanding of macroeconomic policies and choices about the design and results of fiscal policy. The Code is based on the following four principles:

- roles and responsibilities of, and within, government should be clear;
- governments should commit themselves to making comprehensive, reliable information on fiscal activities available to the public;
- the process of budget preparation, execution, and reporting should be undertaken in an open manner;
- fiscal information should be subject to an independent assurance of integrity.

The IMF has prepared a manual that sets out more detailed guidelines on the implementation of the Code.

Code of Good Practices with respect to Financial and Monetary Policies

At the same time as approving the Code on Fiscal Transparency, the Interim Committee also asked the IMF to examine the desirability of developing a code of good practices with respect to financial and monetary policies. This is now actively being developed and, if approved, will serve as a guide for IMF member countries to increase the transparency of the financial and monetary policy processes and thereby enhance the accountability and credibility of financial and monetary policies.

Banking Supervision

The 25 Core Principles for Effective Banking Supervision were developed by the Basle Committee on Banking Supervision - working in close co-operation with a number of supervisory authorities from some key emerging market countries, the IMF and the World Bank - in order to strengthen national financial market supervision and stability. They address the main issues of banking sector supervision - including licensing and structure, prudential regulations and requirements, methods of ongoing banking supervision, information requirements, formal powers of supervisors, and cross-border banking - and are intended to serve as a basic reference and minimum set of standards for supervisory authorities in all countries. A Core Principles Liaison Group has been established in order to bring

together G10 and other supervisors from around the world, with the IMF and World Bank, to monitor the development and operation of the Core Principles.

Securities Market Regulation

The International Organisation of Securities Commissions (IOSCO)[3] has been working to establish generally agreed principles of securities relegation. Following consultation, IOSCO published a set of Core Principles entitled the "Objectives and Principles of Securities Regulation" in September 1998. The purpose of the Core Principles document is to provide securities regulators with a yardstick against which progress towards effective regulation can be measured. It sets out three key objectives - to protect investors; to ensure markets are fair, efficient and transparent; and to reduce systemic risk - and 30 principles to give practical effect to the objectives. The principles cover: the responsibilities of the regulator, self-regulation, enforcement of regulation, co-operation in regulation, issuers, collective investment schemes, market intermediaries and the secondary market. This document should help domestic and international financial authorities encourage and monitor the implementation of high standards of regulation worldwide. IOSCO members are committed to adherence to the Principles, and to seeking domestic changes, where appropriate, to enable this. IOSCO has also published a set of international standards for non-financial statement disclosure[4] that aim to facilitate cross-border offerings and listings by allowing issuers to prepare a single disclosure document for capital raising and listing in more than one jurisdiction at a time. This will help lower the cost of capital raising without sacrificing investor protection. Another IOSCO report deals with the regulation of securities activity on the internet.

Accounting and Auditing

The International Accounting Standards Committee (IASC) publishes International Accounting Standards that aim at achieving uniformity in the accounting principles used by business and other organisations for financial reporting across the world. Although IASC's accounting standards are intended for use worldwide, there is no formal mechanism for monitoring or enforcing their use. IOSCO is about to embark on a process which it is hoped will lead to the endorsement of the use of IASC standards for the purposes of cross-border listings. The use, and enforcement, of IASC standards in other areas is a matter for individual governments to decide. International standards of auditing are established by the International Auditing Practices Committee (IAPC), part of the International Federation of Accountants (IFAC). Again, the implementation and enforcement of these standards is a matter for individual governments or the relevant authority in each country.

Corporate Governance

Corporate governance refers to the sets of principles, rules and practices that define the agency relationship between the stakeholders — shareholders, lenders, managers and employees - in a corporation. It aims to ensure a proper discharge by managers of their duties to the corporation's constituents. The OECD, the Basle Committee, the World Bank and the EBRD are all currently involved in the development of principles and good practices in the area of corporate governance.

1 Countries are required to make available data in the following areas: (a) The real sector — GDP, production indices, labour market, price indices; (b) The fiscal sector — general government or public sector operations, central government operations, central government debt; (c) Financial sector — analytical accounts of the banking sector, analytical accounts of the central bank, interest rates, stock market index; (d) external sector — balance of payments, international reserves, merchandise trade, international investment position and exchange rates.

2 http://dsbb.imf.org

3 IOSCO is a forum for co-operation between the regulators of national securities and futures markets and its membership includes nearly all countries with stock exchanges.

4 "International Disclosure Standards for Cross-Border Offerings and Initial Listings by Foreign Issuers".

the rating agencies would all need information on the extent to which countries were adhering to the agreed standards. In some fields — eg data and auditing and accounting standards — it may be possible, although probably not easy, for investors or rating agencies to acquire the information needed to make judgements on the extent to which countries are adhering to the standards. But, in other areas, eg banking supervision and securities regulation, it could be even more difficult for investors to make informed judgements on the extent to which the agreed standards had been implemented. There may, therefore, be a role for international organisations to assess whether particular standards are being achieved and to make these assessments public.

The IMF could be asked to assess the extent to which countries were complying with the three macro-economic standards that they have been directly responsible for developing — the data standards and the fiscal and monetary policy transparency codes — in the course of carrying out their regular surveillance work. However, the organisations that have developed, or are in the process of developing, the other four main sets of standards — banking supervision, securities regulation, accounting and auditing standards, and corporate governance — do not have the capacity to monitor in detail the extent to which countries have adopted and implemented their standards.

If the IMF and the World Bank were to develop their capacity to monitor their members' adherence to international standards, this could make a significant contribution to developing a more transparent and stable system

Given the close linkages between the health of the financial sector and macroeconomic policy, the IMF, in co-operation with the World Bank, is already in the process of increasing the resources it devotes to assessing the health of countries' financial systems, and, in particular, their banking systems. It has made a start on incorporating an assessment of the strength of a country's banking system in its regular country surveillance exercises.

The World Bank (for developing countries) and the OECD (for developed countries) may be better placed than the IMF to make assessments in respect of compliance with standards for accounting and auditing, corporate governance, and securities market regulation. These organisations may also be better placed than the IMF to assess the adequacy of countries' bankruptcy arrangements.

If, over time, the IMF and the World Bank were to develop their capacity to monitor their members' adherence to a wide ranging set of international standards, then this could make a significant contribution to developing a more transparent and stable international financial system.

Involving the private sector in resolving financial crises

There has been considerable questioning of the desirability of the IMF and other official sector entities providing very large financial

There is a danger that short-term lending could be seen as the least risky option and this would make it more difficult for borrowers to extend the maturity profile of their debt

packages. First, such packages can enable creditors who had lent on short-term maturities to be repaid in full as their debt matures, whereas those who have provided equity finance or longer-term loan or bond finance suffer significant losses if they sell out. Hence, there is a danger that short-term lending could be seen as the least risky option and this would make it more difficult for borrowers to extend the maturity profile of their debt. Such a pattern of financing would lead to an even less stable international financial system. Second, the ability of the official sector to continue to provide financing is constrained. While the immediate tight restraint will be eased when the IMF quota increase comes into effect, the growth in the resources available to the Fund has not kept pace with the expansion in the size of the world's economy, and even less with the expansion in global capital flows.

Hence, there are increasing calls to revert to the pattern established in the 1980s. At that time, once the Fund had agreed an adjustment programme with a debtor country, the private sector lenders (which, at that time, were mainly banks providing loans in the form of syndicated credits) agreed to rollover, and eventually write off, some of their outstanding debt. More recently, in the case of Korea, the commercial bank creditors that had not already withdrawn from the market agreed — in late December 1997 — initially to roll over maturing debt and then to refinance it with a series of medium-term loans.

There are, however, some important differences between the current situation and the 1980s. In the 1980s, the major debtors were mainly sovereign governments, whereas, in the Asian crisis, the major borrowers were banks and companies. Hence there is a much wider range of debtors involved. This need not be a problem if there are effective bankruptcy procedures in place.

Another difference is the much wider range of creditors that are now involved. In the 1980s, bond holders were paid off in full, since they normally accounted for a small proportion of the total debt and it was easier to reach agreement on refinancing by leaving them out of the equation. However, since then there has been a dramatic rise in bond issues — issues by emerging market countries increased from less than $8bn in 1990 to $128bn in 1997 — and in the share of emerging market debt accounted for by bonds.

Thus, if the IMF is unable (or unwilling) to provide sufficient finance to enable a crisis country to meet all its maturing debts as they fall due, then it is increasingly likely that it will not always be possible to pay bondholders on time and in full. At the moment, the typical documentation under which most sovereign bonds (and corporate bonds issued under US law) are issued contains only limited provi-

sions in respect of collective representation and majority voting and no provisions about asset sharing. Potentially, this could make involving bondholders in orderly workout procedures difficult, since a single bond holder can take legal action regardless of whether the majority consider it would be in their best interest to negotiate a collective agreement with the debtor.

This issue was highlighted in the May 1996 report, *The Resolution of Sovereign Liquidity Crises,* which was prepared under the auspices of the Deputies of the G-10 countries.

The report stated:

> "certain contractual or statutory provisions governing debt contracts can facilitate the resolution of a crisis by fostering dialogue and consultation between the sovereign debtor and its creditors and among creditors, and by reducing the incentive for, or ability of, a small number of dissident creditors to disrupt, delay or prevent arrangements to support a credible adjustment programme that is acceptable to the vast majority of concerned parties. Among such provisions are those that (a) provide for the collective representation of debt holders in the event of a crisis, (b) allow for qualified majority voting to alter the term and conditions of debt contracts, and (c) require the sharing among creditors of assets received from the debtor."

The recent G-22 Working Group on International Financial Crises endorsed the earlier conclusions of the G-10 report and also argued that such provisions should also be included in corporate as well as sovereign bond issues. The G-22 report calls for widespread consultation with key private sector players - including the main issuers and their legal advisers — about how to start the process of getting collective action clauses included in new bond contracts.

However, it is not clear whether bonds issued with collective representation, majority voting and sharing clauses would be more expensive to issue than bonds without such clauses (of which there is a large stock in existence). On the one hand, it could be argued that these bonds would be likely to be less favourably treated by the market, since they acknowledged the possibility of rescheduling. On the other hand, these bonds might be more attractive since they provide for an orderly workout process in the event of a crisis, whereas it is less clear what would happen to bonds that lacked these clauses in the event of a payment standstill.

One suggestion currently being considered is that exceptional levels of IMF financing should only be provided if private creditors — whether banks or bondholders — agreed to lengthen the maturity of their claims. For such an arrange-

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There may, therefore, be occasions when a country is left with no option but to declare a standstill on the repayment of its debts as they fall due. This is not a step any country would wish to take lightly

ment to work in a case where bonds accounted for a significant proportion of the outstanding debt, bondholders would need to be represented collectively and have a mechanism for reaching decisions.

When a country's debt position has reached the point where it is faced with no option but to delay payment of debts falling due, it may still be possible for the country to reach a voluntary agreement with its creditors. This is likely to be less costly in terms of loss of market access. Informal agreements may also prove helpful in limiting the prospect of contagion to other countries. A voluntary solution is most likely to succeed where a substantial portion of external liabilities is held by creditors that are relatively cohesive, and where procedures for creditor co-ordination already exist. However, the terms on which creditors might be prepared to provide refinance on a voluntary basis could be so unfavourable that they might create unstable "debt dynamics" and thereby merely serve to postpone, or even exacerbate the crisis, rather than help to resolve it.

There may, therefore, be occasions when a country is left with no option but to declare a standstill on the repayment of its debts as they fall due. This is not a step any country would wish to take lightly, since it is likely to exclude the country from further market access and could also jeopardise existing trade finance. The selection of the type of payments to suspend will depend on the circumstances of the particular case, but is likely to include categories that require large payments in the short term. In practice, it might prove difficult to limit the range of payments covered by a standstill, since the suspension could trigger cross-default clauses in debt not covered by the suspension.

Having conducted a survey of the experiences of countries that have suspended payments on all, or a portion of, their external debt, the G-22 Working Group on International Financial Crises concluded that there are a number of features that need to be observed for a suspension of payments to prove effective:

- its scope should be clearly defined with respect to both the types of obligations and the maturities covered;
- it should be linked to the start of negotiations to lengthen the maturity of existing debt and to provide time for a more comprehensive restructuring;
- if possible, it should provide incentives for new credits;
- it should place no restrictions on secondary trading of debt instruments;
- the government should insist on continued dialogue/negotiations between creditors and debtors;
- it should be linked to policy adjustment;
- if at all possible, interest payments should be kept current.

However, while it is to be hoped that a suspension will provide a respite from the immediate problem, future financing when market access is regained is likely, at least initially, to be at an appreciably higher cost. The declaration of a standstill by one country may also have adverse cost implications for other countries judged by the markets as likely to follow the same route.

Conclusion

This article has discussed a number of issues that are under active consideration by policy makers. If implemented, this raft of measures — many of which would require policy action at the national level and others action at the international level — could go a considerable way towards building a more stable international financial system. Some of the main areas for action that have been identified — especially developing more robust national financial systems in many emerging market countries — will require the implementation of a host of different policy measures and will inevitably take considerable time to achieve.

If implemented, this raft of measures could go a considerable way towards building a more stable international financial system

Nevertheless, providing significant progress can be made in the coming months and years on all the five main areas — reducing the volatility of capital flows; strengthening banking systems; corporate re-organisation; setting, implementing and monitoring internationally agreed standards; and involving the private sector in resolving financial crises — outlined in this article, then there are grounds for thinking the world should be able to continue to enjoy the wealth-creating benefits that result from capital being allocated efficiently on a global basis, while reducing the destabilising effects that can result from large and sudden reversals of capital flows.■

Notes

1 See pages 52-78 of the IMF's September 1998 "World Economic Outlook" and pages 59-81 of the IMF's September 1998 "International Capital Markets: Developments, Prospects and Key Policy Issues" for an analysis of the causes of the Asian crisis. These can be found on the Websites:
http://www.imf.org/external/pubs/FT/weo/weo1098/index.htm
http://www.imf.org/external/pubs/FT/icm/icm98/index.htm

2 These include: the IMF and the multilateral development banks, the G-7 Group of countries - Canada, France, Germany, Italy, Japan, the UK and the US - whose Finance Ministers made a report "Improving the Architecture of the Global Financial System" to Heads of State or Government for their meeting in Birmingham May 1998 (available on http://birmingham.g8summit.gov.uk); and a group of 22 countries convened by the US authorities that set up three Working Groups which recently produced reports on "Transparency and Accountability", "Strengthening Financial Systems" and "International Financial Crises". These reports can be found on any of the following four Websites:
http://www.imf.org/external/np/g22/index.htm
htpp://www.worldbank.org/html/extdr/ifa-reports/index.htm
http://www.bis.org/wnew.htm
http://www.oecd.org/subject/fin_architecture/

3 The communiqués issued by the IMF Interim Committee can be found at http://www.imf.org/external/np/sec/pr/1998/PR9847.htm and the communiqué of the joint IMF/World Bank Development Committee at http://www.worldbank.org/html/extdr/extme/dc100598.htm

4 The Chilean authorities set the reserve requirement at 20 per cent on the introduction of the policy in June 1991. The rate was increased to 30 per cent in May 1992. During the current year, in response to a weakening of the peso, the reserve requirement was cut to 10 per cent in June and removed completely in September.

5 Zone A is OECD countries plus countries associated with the General Arrangements to Borrow and Zone B is the rest of the world.