



BANK OF ENGLAND

# Speech

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## **International Financial Regulation and Stability**

Speech given by

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The views expressed here are those of the author and do not necessarily reflect those of the Bank of England or the Basel Committee. I am grateful to colleagues in the Bank of England for helpful comments and to Inke Nyborg for carrying out background research.

## **International Financial Regulation and Stability**

Since 1988 international minimum capital standards produced by the Basel Committee on Banking Supervision have formed the cornerstone of bank regulation across the globe. In the EU the Basel Capital Accord is the basis for the EU banking Directives, particularly in respect of solvency and own funds, which are legally binding in all Member States. And in over 100 countries worldwide the Accord has been enshrined in domestic bank regulations. This paper examines the reasons for international agreements on financial regulation and considers whether the drivers are the same as those behind domestic financial regulation, in particular regulation of banks.

### **Reasons for domestic regulation of banks**

There has been an understanding for two hundred years that weakness in the banking sector may have wider effects. Thornton (1802) recognised that problems in one bank could spill over into more widespread difficulties in the sector. The nature of the contracts which banks hold (short-term deposits and longer-term loans) exposes them to the possibility of runs. More recent papers (e.g. Bernanke, 1983) have highlighted the wider costs to the economy if banks fail because of their central position in the payments system and their special role in intermediating funds to small firms and the retail sector. Concerns that banks can pose threats to the system initially led to the development of lender of last resort facilities, restricted in theory to solvent banks in liquidity difficulty, but over time has also led to the development of supervision of banks to reduce the likelihood of failure. Domestic regulation is a response to the gap between the private cost of failure of a bank and the public cost. But it is also a response to the moral hazard which comes out of other arrangements to protect the system or depositors. Extensive safety nets or deposit protection arrangements reduce the effectiveness of market discipline which is also affected by the substantial asymmetries of information between banks and the markets given historic cost accounts (see Jackson and Lodge, 2000) and between banks and their depositors.

The factors behind domestic regulation of banks are therefore the following:

- (1) The potential externalities stemming from bank failures which mean that the social cost of failure is higher than the private cost - resulting from:
  - (a) Risks of contagion between banks exacerbated by the risk of runs given the nature of banks' deposit and loan contracts.
  - (b) The special role that banks play in the real economy because of their central role in the payments system and in lending to small business and retail.
- (2) The asymmetry of information between the market, depositors and banks which reduces market discipline.
- (3) Moral hazard caused by other mechanisms which have developed to deal with the problems in banks – lender of last resort and deposit protection.

All of these provide a motivation for domestic regulation but not necessarily international minimum standards. To consider the reasons behind international regulation it is worth reviewing the factors which led to the original Accord.

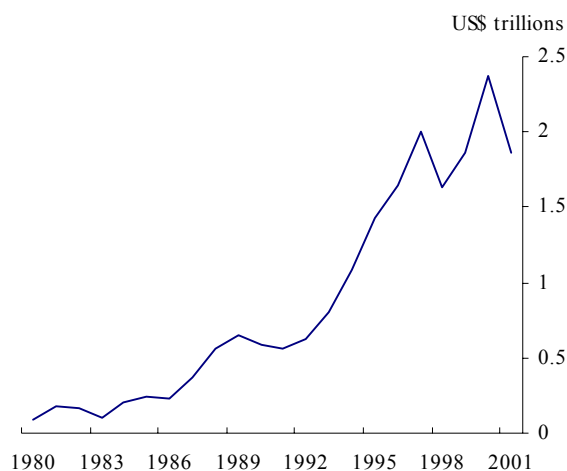
### **Competitive pressures on capital**

Before the agreement on the 1988 Basel Accord, countries were developing rather different approaches to prudential supervision. The United Kingdom had gone down the route of broad risk weights. A 1980 Bank of England paper 'The Measurement of Capital' set out a risk weighting structure for bank assets. The United States had first begun to move to establish minimum regulatory capital ratios in 1981 and by 1985 had developed a minimum leverage ratio approach – primary capital (equity and loan loss reserves) to total on-balance-sheet and off-balance-sheet assets of 5.5% and total capital (including limited life preferred stock, subordinated debt and some intangibles) to total assets of 6%. In Japan the leverage ratio for all banks was 4% [(capital without equity revaluation gains)/(total assets including an amount corresponding to guarantees)]. In addition, banks with foreign branches/subsidiaries had to satisfy 6% [(capital and 70% of equity revaluation gains)/(total assets including amount corresponding to guarantees)]. Many countries had prudential approaches but without fixed minima. At the same time competitive pressures between the

major banks had grown substantially with the development of the syndicated loans market where the big international banks competed head to head.

### Chart 1

Data on \$US equivalent amount of new syndicated loan issuance for the global syndicated loan market

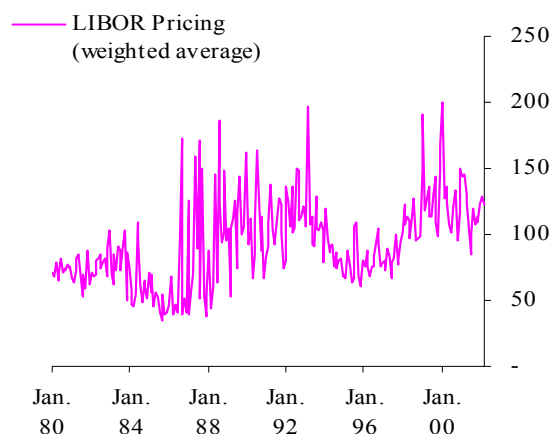


Source: Dealogic

The highly competitive nature of the euro credit market led to continual downward pressure on spreads and there was a concern that there was a link between pricing and capital. It was felt that banks which held less capital to back the loans were prepared to price them more finely, forcing other banks to reduce their pricing or lose market share in what was seen as an important strategic market. The chart below sets out the average spread over LIBOR on new US\$ syndicated loans. It clearly shows the pressure on spreads in the market in the early to mid 1980s.

## Chart 2

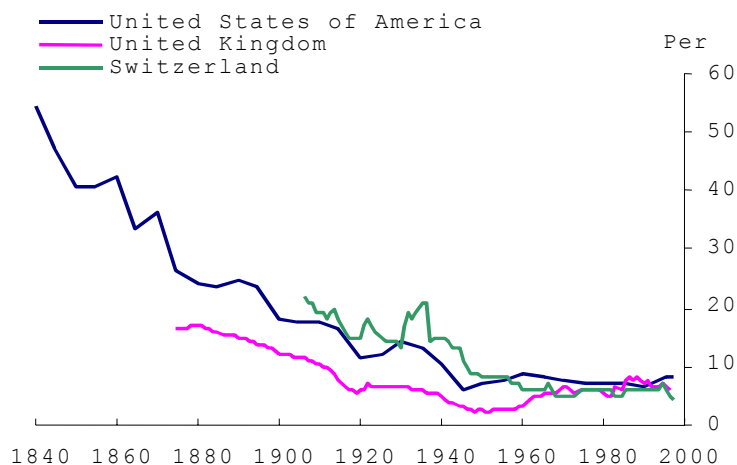
Data for the US\$ syndicated loan market on the average spread over libor at issuance



Source: Dealogic

Domestic markets for loans to large corporates were also becoming more contestable. In effect, for large corporates, an international market was growing even for loans in the domestic currency of the borrower. By 1986, 39% of loans to the UK non-bank private sector by banks operating in the United Kingdom were accounted for by foreign-owned banks and in terms of domestic currency loans the percentage was 27%.

Equity as a percentage of assets held by the banks had been declining across many banking systems since the 19<sup>th</sup> century – see chart below – and the concern was that the intense competitive pressure in some markets would lead to further erosion. Another concern was that many exposures of banks had moved off balance sheet because of the development of the swaps and derivatives markets. These increased the effective leverage ratios from the late 1970s – capital was falling relative to the risks.

**Chart 3: Bank's equity capital as a percentage of total assets**

Source: Bank of England, Federal Reserve Board and Swiss National Bank estimates. The data for each country were developed from different sources over time, with different accompanying standards and therefore only illustrate long-run trends.

These data for banks' equity capital as a percentage of assets are not risk adjusted and risk controls have probably substantially improved since the 19<sup>th</sup> century - although it is noticeable that the incidence of banking crises does not appear to have fallen. Work by Bordo et al 2001 indicated that the period of exceptional instability for banking crises was the inter-war period (closely followed by the period after 1973). In contrast, banking crises were less frequent prior to 1913. The decline in the equity/asset ratio acceptable to the market since the 19<sup>th</sup> century may also have reflected the development of official intervention in the banking sector – lender of last resort, deposit protection arrangements and also a growing belief in the markets that some banks were simply too big to fail.

One factor behind the development of an international minimum floor for capital adequacy was a desire to place a peg in the ground and effectively prevent further erosion of capital requirements. There was a concern that, without an international agreement on a minimum level, supervisors would come under intense pressure gradually to relax domestic standards (competition in laxity).

The 1988 Accord which set a minimum capital standard for risk assets of internationally active banks of 8% Tier 1 plus Tier 2<sup>1</sup> and 4% Tier 1, was followed by an increase in the risk asset ratio in a number of G10 countries – the average ratio of capital to risk-weighted assets in the G10 rose from 9.3% in 1988 to 11.2% in 1996 (see Jackson *et al* 1999). But market pressure on countries regarding the level of prudential requirements can be seen in the experience of Denmark, which weakened its prudential rules to bring them into line with the Basel Accord.

In effect the international agreement came to be seen as an essential underpinning of effective domestic regulation.

### **The design of international capital requirements**

The way that internationally agreed minimum standards are designed can itself potentially affect financial stability. The original Accord represented a major advance but over time the broad risk bands which gave little differentiation between loans to private sector non-bank borrowers gave scope for regulatory arbitrage. Banks could securitise their higher quality assets and reduce the actual coverage of risk by capital even though their risk asset ratio remained unchanged (Jones, 2000). By March 1998 outstanding non-mortgage securitisations by the ten largest US bank holding companies amounted to around \$200bn (more than 25% of these banks' risk weighted assets) – see Jackson *et al* 1999.

The new Accord is being designed to make the risk weights sensitive to the risks of individual assets. This will reduce the gap between the economic capital assessments for high quality loans and the required capital. But risk sensitive approaches to setting capital raise their own financial stability issues. The Committee is now focussing on how best to reduce the risk that risk sensitive capital requirements could increase the likelihood of credit crunches. The existing accord is potentially procyclical because although risk weights on individual assets remain fixed over the cycle, capital declines in a recession because of write offs and specific provisions. There was a concern that the fixed minimum capital under Basel 1 could lead to credit crunches and there is limited evidence for the US in the early 1990s that it might have

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<sup>1</sup> Broadly speaking, capital is defined as Tier 1 comprising equity and disclosed reserves and Tier 2 comprising subordinated debt and general provisions

affected lending in some states (Hancock and Wilcox, 1997, Hancock and Wilcox, 1998 and Peek and Rosengren, 1997).

Under the new Accord an additional element of procyclicality will be added by the capital requirements on non-defaulted assets which under the international ratings approach will vary according to the probability of default rating assigned by the bank. There will be no extra capital requirement on defaulted assets if expected losses are fully provided against. A number of papers have explored whether the new risk sensitive requirements will significantly increase the likelihood of credit crunches in recessions. For banks using the internal probability of default rating schemes it seems to depend on whether a bank is using a scheme where ratings are conditioned on the point in the cycle rather than taking into account different possible economic states (see Catarineu *et al*, 2002). It also of course depends on the steepness of the risk weight curves used by the Committee.

The Committee is considering using rather flatter curves than originally proposed at least in part because of this concern about procyclicality. There is also an active debate over whether banks should be required to use ratings which are not conditioned on the point in the economic cycle and also whether a mechanism such as stress testing should be developed to ensure that capital is built up when risks are taken (in booms) not just when they are realised (in recessions).

This highlights the interrelationship between the design of capital requirements and the macro economy.

Another type of concern has been that regulation, by standardising some of the models used by banks, could increase herding. This criticism has been levelled at the VaR models used by banks to assess capital requirements on trading book positions (Persaud, 2000). The Basel Committee allowed models with different designs but they had to conform to a common confidence level and back data period. There is in fact little evidence of effects of this kind.



## **Market discipline**

One important issue is whether the market would have effectively placed a break on any erosion in bank capital had the G10 not acted. This begs the question how effective market discipline is for banks. Crockett (2001) argues that there are four prerequisites for market discipline of banks to be effective – the market must have sufficient information, the ability to process it, the right incentives to process it and the mechanisms to exercise effective discipline.

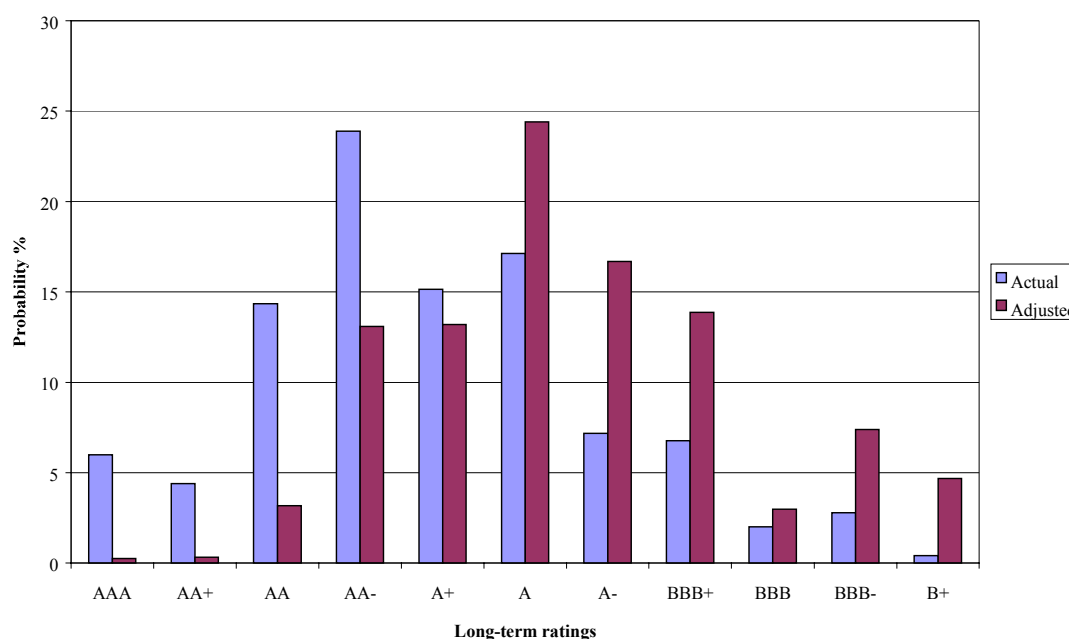
In terms of the last factor, the developments in banking in the last 20 years have substantially increased market discipline on large banks. Even banks with a large retail deposit base are dependent on the willingness of their counterparties to set the limits for exposures to them necessary for the bank to carry out the different transactions to hedge its books, and participate in the payments systems and FX market. For the largest banks this must exert a substantial discipline. One large bank indicated that swap trading to hedge its own positions can amount to around £20 billion a month. The last BIS survey of Foreign Exchange Activity (1998) showed that turnover in OTC derivatives in the London market in April 1998 amounted to \$591 billion a day. There is some evidence (see Jackson, Perraudin and Saporta 2002) that a bank's ability to transact large volumes of swaps depends on its external credit rating. Lower-rated banks may still have access to the markets but would have to collateralise their exposures. The limits set for activity with them would also be lower. This is consistent with US evidence as well. Bhasin (1995) finds that OTC derivative users are consistently and significantly more highly rated than other firms in general. Gunther and Siems (1995) find a positive relationship between capitalisation and participation in the OTC market.

But the importance for a bank of its external rating does not actually place a floor on its capital. This is because ratings are not simply a measure of the financial standing of a bank but also reflect the likelihood of support either from a shareholder or in the case of large banks more usually the government. Market discipline applying through the ratings is therefore intrinsically contaminated by the market belief that some banks might receive support. Other types of market discipline (for example the pricing of subordinated debt) will

also be contaminated by expectations of support unless governments have made it clear that no subordinated debt holder will ever be bailed out.

FitchIBCA provide a separate rating for the likelihood that a bank will receive support and state that an obligor's long-term bond rating is arrived at by combining the independently determined stand-alone ratings and the support ratings. Jackson, Perraudin and Saporta (2002) used an ordered probit model in which dummies for the different stand-alone and support ratings act as explanatory variables to estimate the support free ratings for G10 banks rated by FitchIBCA at end -1998. The chart below shows the distribution of actual long-term ratings and support free ratings for the 251 G10-rated banks. The median rating falls from AA- to A after the adjustment to remove support.

**Chart 4: Comparison of unadjusted with adjusted distribution of ratings**



The degree of implicit or even overt support for the largest banks varies across countries. The chart below sets out the average FitchIBCA support rating for all banks in a country with Tier 1 and Tier 2 capital larger than €3bn. FitchIBCA support ratings range from 1 (a bank for which there is a clear legal guarantee on the part of the state or a bank of such importance that

support from the state is judged as likely to be forthcoming) to 5 (a bank for which support cannot be relied upon).

**Table 1: Average Fitch Support ratings**

<u>Country</u>	<u>Average Fitch Support rating as at end 2001</u>
Belgium	2.00
Canada	2.00
France	2.50
Germany	1.67
Italy	2.33
Japan	1.86
Netherlands	1.67
Spain	2.00
Sweden	2.00
Switzerland	1.00
UK	2.50
US	4.25

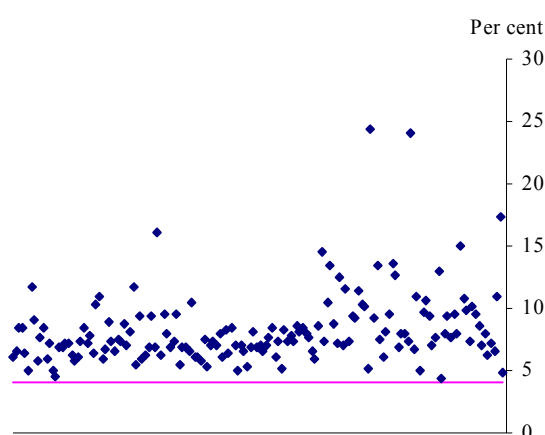
If some supervisors had gone down the route of weakening their standards (or had not introduced a standard) then they could well have been forced to combine this approach with growing use of implicit or explicit support mechanisms. Indeed once whole banking systems become weakened the support has to become more and more explicit – for example, in 1996 the Japanese government guaranteed fully the non-equity liabilities of Japanese banks for a five year period, since extended.

Even without the contamination of market discipline by implicit or explicit support there is a question of how effective market discipline of banks is given the opacity of bank accounts. In some countries (eg, Germany) profits continue to be smoothed and in almost all countries historic cost accounting does not disclose any embedded interest rate or credit losses already in the book. An exception is Denmark where accounts are adjusted to take losses of this kind into account (see Jackson and Lodge 2000).

It is also very difficult for an outside party to assess the riskiness of a bank's portfolio without using measures such as volatility of earnings as a proxy. Here the Basel Accord provided a valuable mechanism to compare banks on the same basis - the risk weights were universally employed and the ratio of capital to risk-weighted assets therefore provides a common measure. The broad weighting bands did not provide a fine-tuned risk adjustment but they did take into account the proportion of the book in government bonds and retail mortgages against other risks. The Basel Accord also took into account off-balance-sheet exposures such as swaps and provided a common measure of capital. The Accord may well have made it easier for market discipline to operate by providing a common framework for assessing banks.

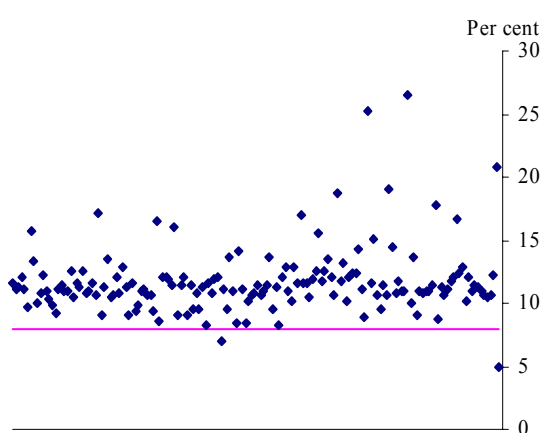
The Accord has become a floor against which banks are measured and many banks choose, because of market pressures, to operate well above it. The minimum nature of the Accord is especially apparent with regard to Tier 1 – a bank must hold at least 4% of Tier 1 (equity and reserves) against risk weighted assets. Jackson, Perraudin and Saporta (2002) show that the current Accord delivers a confidence level for large banks with high quality books of around 99.9% (equivalent to the upper end of BBB) and around 99% (BB) for banks with lower quality portfolios. In contrast the banks generally employ solvency standards substantially higher than this level leading to much higher Tier 1 levels being employed by some banks – see charts below which show capital ratios of G10 banks with Tier 1 plus Tier 2 capital of more than €3bn.

**Chart 5: Tier 1 risk asset ratio**



Source: Bankscope

**Chart 6: Tier 1 plus Tier 2 risk asset ratio**



Source: Bankscope

In one important respect the Basel Accord did not deliver a common framework. The Committee had defined allowable capital and had set the weights to give the risk adjusted assets, but had not felt able to override local accounting practice with regard to impaired assets. This has severely affected comparability in the risk asset ratios. If banks have not adequately provided against impaired loans, capital can be substantially overstated. Increasing securitisation of higher quality assets, particularly by US banks, has also affected the comparability of the risk asset ratios.

### **Risk of contagion**

One of the core reasons for domestic prudential regulation of banks is the risk of contagion if a bank fails because of both direct exposures and the risk that problems in one bank may be seen as indicative of problems in other banks. There are similar linkages between large international banks with very large direct exposures between them and also the potential for concerns to develop because of problems in common areas of business - although the latter may be less of a concern than is the case in a domestic banking system, such as the United Kingdom, where some of the largest banks are almost mirror images of each one other.

The United Kingdom has, of course, a particularly open and international banking system and here the cross exposures between UK banks and markets and foreign banks are very large. The table below sets out the number of branches and subsidiaries of foreign banks in the United Kingdom.

**Table 2: Foreign banks' branches and subsidiaries in the UK**

	Branches	Subsidiaries	Total
EEA	112	10	122
US	18	19	37
Japan	12	5	17
Other developed	18	13	31
Emerging markets (remainder)	70	29	99
<b>Total</b>	<b>230</b>	<b>76</b>	<b>306</b>

Source: FSA Banking Act List, October 2001

More important than the sheer number of foreign banks operating in the London market is the size of the exposures between different groups of banks. The Bank carried out a review of the large exposures returns supplied by banks to the FSA at June 2000. These data, which show the 20 largest exposures to individual counter-parties plus any others over 10% of a bank's regulatory capital, indicate very substantial interconnections.

**Table 3: Exposures of large UK banks to non-UK banks**

	UK commercial banks	UK mortgage banks	£bn
EEA	114.9	19.6	
Swiss	14.3	1.8	
US	32.6	4.3	
Japanese	9.7	0.2	
Other	6.4	0.9	

At end-2001, the UK commercial banks together had Tier 1 capital of £65bn and the UK mortgage banks together had Tier 1 capital of £24bn. These potential exposures are therefore very large in relation to the UK banks' capital. The large exposures figures are only indicative because they may reflect limits which are rarely fully drawn down and some exposures may be collateralised but they indicate the potential size of exposures to other entities on a consolidated basis.

Other Bank data show the extent to which the whole London market (all banks resident in the United Kingdom) is exposed to foreign banks operating in the United Kingdom. These exposures are drawn rather than limits but some may be collateralised. These data too point to huge exposures.

**Table 4: London market exposures to groups of foreign banks resident in UK  
Interbank deposits – excluding repos (as at Q3 2001, in £bn)**

	£	Euro	Other	<b>Total</b>
Swiss	1.9	1.9	5.8	<b>9.6</b>
EU	19.8	6.6	19.0	<b>45.4</b>
Japan	3.6	2.2	3.4	<b>9.3</b>
Other developed	7.9	2.0	5.4	<b>15.3</b>
United States	9.3	13.6	18.2	<b>41.0</b>

Source: Bank of England MFSD

The London market does not mean just UK banks. The foreign banks are themselves part of the London market and so, for example, an exposure between two Swiss banks resident in the UK would appear as a Swiss exposure to the London market.

The swap market has significantly increased the interlinkages between the largest banks because interest rate risks tend to be laid off with a small number of large swap counterparties leading to sizeable credit exposures from contracts with a positive value. The data below relate to a sample of 37 banks in the UK system (3 Swiss, 7 EU, 10 Japanese, 6 US, 8 UK and 3 other developed). The table shows the market value of the gross liabilities of these banks to the rest of the London market relating to foreign exchange and interest rate swaps.

**Table 5: London market swap exposures (interest rate and FX) to groups of foreign banks resident in the UK (as at Q3 2001, in £bn)**

	£	Euro	Other	<b>Total</b>
Swiss	4.42	6.5	12.48	<b>23.4</b>
EU	2.21	3.38	5.59	<b>11.18</b>
Japan	2.6	1.82	2.73	<b>7.15</b>
Other developed	0.91	0.65	0.65	<b>2.08</b>
United States	4.68	24.05	32.5	<b>61.23</b>

Source: Bank of England MFSD

These cross exposures between domestic and foreign banks create a tension vis-à-vis one country's goal for safety and soundness. Whereas a country which was concerned to limit the potential disruption to its markets from bank failures would choose to set an appropriate prudential regime for its banks, the prudential regime for a foreign bank is largely set by its own domestic authority. For branches of foreign banks operating in the United Kingdom, capital adequacy is set by the home authority for the whole bank. There is no concept in the UK (unlike the US) of branch solvency where the assets in the branch can be used to pay domestic creditors. This is because of the difference in solvency law. The UK uses the single entity doctrine where a bank and its branches are wound up as a single entity, whereas the US uses a separate entity doctrine with US branches being wound up separately.

Even in the case of subsidiaries, where separate capital requirements are set, the soundness in fact depends on the soundness of the whole bank. Confidence would fall if the rest of the bank were in difficulty, causing liquidity problems for the subsidiary. In an open market such as the United Kingdom, the quality of home country supervision and the capital rules being imposed are therefore very important. Here international capital agreements have a very important role to play. In the UK many of the largest overseas bank operations have been in branches rather than subsidiaries which is probably related to the fact that the UK authorities have generally required more capital of banks operating in the UK than the Basel minimum. A branch can operate on the Basel minimum.

In the EU agreed minimum capital standards are particularly important because a member country cannot deny a bank established elsewhere in the EU the right to establish a branch in their jurisdiction. This is known as the right to passport.

Beyond capital, the adequacy of the whole prudential regime is important. The early work of the Basel Committee focussed on this aspect of international banking – see Appendix. A key potential risk with banking groups is that parts may be supervised and parts may not be which could weaken the whole structure. For example, debt taken on by a holding company can be downstreamed as equity to a subsidiary making the subsidiary look sound even though it was



part of a very highly geared group. The 1975 Basel Concordat established a division of responsibilities among national supervisors to try to ensure that there were no gaps in the supervisory net caused by foreign operations of banks. It established the principle of consolidated supervision. Home-country supervisors would monitor the risk exposure of the whole banking group. In 1992, following the closure of BCCI, the Committee agreed minimum standards for the Supervision of Cross Border Establishments. This required that the host country into whose jurisdiction a foreign bank was trying to expand would determine whether the bank and the home-country supervisor had the necessary capabilities to meet the minimum standards laid down by the Committee.

The Basel Accord focussed on a minimum standard for capital and it has not been mirrored by minimum standards for liquidity. This is in part because this was not seen as an area where there was pressure for competition in laxity. It was also because any liquidity rules would clearly need to reflect local market conditions, the behaviour of local depositors and so on. But this is an area where the Committee has given guidance and where more work is likely to be carried out in the future.

### **Disruption to the real economy**

Besides the direct channel for systemic risk to spread via interbank exposures, in a domestic context real economic effects are also felt through disruption to intermediation. Some borrowers (small and medium-sized enterprises) and the personal sector are dependent on bank lending and cannot access the securities markets directly. In terms of international contagion this is perhaps less of a concern. Although foreign banks operating in the United Kingdom account for a sizeable proportion of lending to the UK private sector (25% at December 2001) and within this 40% to private non financial corporations, most is accounted for by lending to the UK large corporates which have access to other sources of funds. But it is still possible that a severe problem in the foreign-owned banks could result in some disruption in lending to UK borrowers. A reduction in bank lending from Japan to the rest of South East Asia seems to have affected growth in the region. Japanese lending started to fall in 1997 Q2 ahead of the South East Asian crisis.

Another route between systemic problems in one country and the economic health of other countries lies in trade. Hoggarth, Reis and Saporta (2002), review the estimates of output

losses during 47 banking crises in 37 countries over the period 1977-98. They find that output losses are large – amounting to around 15%-20% of annual GNP. They also find that, on some measures, the costs are as high or higher in developed as in emerging markets. Severe banking crises are therefore likely to affect the major trading partners of the country affected. In an international context the potential welfare costs of weak banking systems is larger than the costs to the country directly affected. This is a particular concern in free trade areas such as the EU which have resulted in very close links between the participating countries. France and Italy export 16.3% of total exports to Germany and Ireland exports 21.7% to the UK. 11.1% of UK exports go to Germany and 9.2% to France.

The trade channel widens the interest in international sound banking beyond just the large banks with substantial interconnections in the world banking markets. A country with large numbers of smaller, weak banks might not expose other banking systems directly. But if those banks were supplying important parts of the domestic economy with credit, the economic consequences of severe problems could spill over into its trading partners.

The IMF has recognised the importance of encouraging a general strengthening in financial systems through the FSAP programme, established in May 1999. It is a joint IMF/World Bank approach to improving the soundness of financial systems in member countries. Supported by experts from a range of national agencies and standard-setting bodies the programme seeks to identify the strengths and vulnerabilities of a country's financial system; to determine how key sources of risk are being managed; to ascertain the sector's developmental and technical assistance needs; and help prioritise policy responses.

### **Securities Firms**

The international minimum prudential standards for banks have not been mirrored by agreed minimum standards for securities firms. IOSCO (the International Organisation of Securities Commissions, which brings together member agencies with the aim of co-operating to achieve high standards of regulation and to share information on their experience in their domestic markets) produces papers making recommendations about best practice but without seeking agreement for universal adoption of one approach. In the EU there are agreed minimum standards based on the Basel rules for bank trading books so that securities firms can passport from one jurisdiction to another within the EU.

In part the different paths taken must reflect the traditional view of the special systemic nature of banks which led to the establishment of banking supervision within the central banks in most countries initially (see Jackson 2000) and to the G10 central bank governors taking the lead in establishing the Basel Committee. In fact the international minimum prudential standards for banks were a central bank initiative stemming from financial stability concerns. There have been no parallel central banking initiatives regarding securities firms. But it also reflects the fact that in many countries, securities activity is solely within the banks and covered by Basel and in others securities firms are small relative to the banks. The only countries with very large stand-alone securities firms are the United States and Japan. There are fundamental differences between the approaches to supervising these standalone securities firms and those adopted by Basel. In particular regulation of the US securities firms does not accord with one of the basic Basel precepts – consolidated supervision of the whole group. The principle behind SEC regulation is that the registered/broker dealer can be wound down without loss to creditors. Unregulated entities are outside the broker/dealer although the SEC is now extending some form of generalised oversight beyond the broker/dealer.

The LTCM case did highlight the potential threat to markets if a very large counterparty fails leading to large quantities of collateral having to be sold. This led to a study by the Financial Stability Forum and recommendations about the links between regulated and unregulated entities.

There are now growing links between banks and insurance companies highlighting the different capital requirements required for the same risks. This is because banks can transfer credit risk to insurance companies using a variety of mechanisms (Rule 2001). The new Basel Accord, which will have much higher capital requirements for low quality credits, may well encourage even greater use of insurance to transfer the risk. The Joint Forum, which involves bank, securities firms and insurance regulators, together with finance ministries and central banks, is considering the differences in approach to setting capital for the different types of firm.

## **Conclusion**

There are parallels between the factors leading to domestic regulation of banks and international agreements on minimum standards.

- The risk of contagion between large internationally active banks is as high as the risks within some domestic markets.
- The externalities of a domestic banking crisis are also high in an international context. Banking crises can reduce GNP by 10% to 20% during the crisis which will have large knock on effects on trading partners particularly in free trade areas such as the EU.

But international standards were also seen as an essential underpinning of effective domestic regulation. International minimum standards for banks were a response to a financial stability concern that there could be competition in laxity between authorities driven by the growing international banking markets and the perceived effect of capital requirements on banks' ability to compete.

The way in which standards are designed can also have financial stability implications. There were concerns that fixed minimum requirements under Basel could create credit crunches and there are now concerns that procyclical requirements under Basel II may exacerbate the effect.

Minimum standards for banks have not been mirrored by parallel internationally agreed minimum standards for securities firms (except within the EU) perhaps because the systemic effects of crises are seen as smaller but also because there are fewer large standalone securities firms and they compete with banks in only some markets.

There are growing indications that credit risk is likely to be transferred from banks to insurance companies which is leading to increasing interest in the different capital regimes for the same risk and this may eventually led to pressure for international harmonization in this area.

### **THE BASEL COMMITTEE**

The Basel Committee on Banking Supervision is made up of representatives from the G10 plus Switzerland, Luxembourg and Spain. Each country has a representative from the central bank and, if separate, from the agency responsible for banking supervision. It was established at the end of 1974 following the collapse of Bankhaus Herstatt in West Germany and other market disruptions. The first meeting took place in February 1975. Initially it discussed international co-operation in order to close supervisory gaps but it has also had a wider objective of improving the quality of banking supervision worldwide. The Committee reaches agreements which the members have said they will abide by but they do not have legal force. Agreements are reached through consensus, not through formal voting. The Committee reports to the Committee of Central Bank Governors of the Group of Ten countries. There is also from time to time a joint meeting of the G10 Governors and the Heads of Banking Supervision in the G10 to discuss major initiatives.

#### **Principles for the supervision of banks' foreign establishments**

In 1975 the Committee agreed the Basel Concordat (BCBS, 1975), which laid down a division of responsibilities among national authorities to try to ensure that there were no gaps in the supervisory net caused by the foreign operations of banks. It established that the home country supervisor of the parent bank was responsible for the prudential supervision of branches of foreign banks but the local or host supervisor was responsible for subsidiaries. It was amended in 1983 to ensure that where host supervision of subsidiaries was not adequate, the home supervisor should extend their supervision or discourage the bank from retaining the subsidiary. Where the host supervisor felt that the home supervisor was inadequate it would forbid the operation access to their jurisdiction or impose conditions on the conduct of business. It established the principle of consolidated supervision for the first time. Host country supervisors were responsible for the foreign establishments operating in their territories (financial soundness of foreign branches and solvency for subsidiaries) but the home country supervisors would monitor the risk exposure of the whole banking group as well as the adequacy of their capital on the basis of the totality of the business. Regarding

liquidity the host authority was responsible for monitoring the liquidity of foreign branches and subsidiaries but the home authority was responsible for monitoring the liquidity of the group as a whole.

In 1992, following the closure of BCCI, the Committee agreed minimum standards for the supervision of international banking groups and their cross-border establishments (BCBS, 1992). This required that a host country into whose jurisdiction a foreign bank was trying to expand would determine whether the bank and the group's home-country supervisor had the necessary capabilities to meet minimum standards laid down by the Committee. The home authority should monitor banks' global operations on the basis of verifiable consolidated data, be able to prohibit corporate structures which impede supervision and be able to prevent banks from establishing a presence in suspect jurisdictions. The Committee laid down that:

- (1) All international banking groups and international banks should be supervised by a home country authority that capably performs consolidated supervision.
- (2) The creation of a cross border banking establishment should receive the prior consent of both the host country supervisory authority and the bank's and, if different, the banking group's home country supervisory authority.
- (3) Supervisory authorities should possess the right to gather information from the cross-border banking establishments of the banks or banking groups for which they are the home country supervisor.
- (4) If a host country authority determines that any one of the foregoing minimum standards is not met to its satisfaction, that authority could impose restrictive measures necessary to satisfy its prudential concerns consistent with these minimum standards, including the prohibition of the creation of banking establishments.

### **Minimum capital standards**

The 1988 Basel Capital Accord set 8% as the minimum ratio of capital to risk-weighted assets for internationally active banks in the G10 (BCBS, 1988), but it has since been adopted by over 100 countries worldwide. It uses a simple weighting structure designed to reflect the

riskiness of the assets, with most claims on the private sector weighted at 100%, claims on banks in the OECD and under one year claims on other banks weighted at 20% and claims on OECD governments zero weighted. There was a limited recognition of collateral. Capital was defined as Tier 1 comprising equity and disclosed reserves and Tier 2 comprising subordinated debt and general provisions and other reserves which met certain conditions. The Accord included a way of measuring the potential future exposure of derivatives and contracts for difference.

In 1996, the Accord was amended to cover market risk for trading book positions and FX and commodity exposures (BCBS, 1996). Banks were offered the choice between a standard approach with percentage capital requirements or the use of their own value-at-risk models subject to conditions laid down by the Committee. The models must be built to deliver a confidence interval of 99.5%, using at least one year's back returns data and losses must be calculated to cover a 10-day holding period. The capital requirement is the higher of the latest daily VaR or three times the two-month moving average of daily VaRs.

The main Accord is currently being revised to make it more risk based (BCBS, 2001). The risk weighting of credit risk exposures will be based on external ratings in a standardised approach and on banks' own internal assessment of probability of default in a foundation internal ratings approach (and in an 'advanced approach' also on banks' assessment of loss given default). The new Accord will be based on three pillars – Pillar 1 will set minimum capital requirements for the banking book (credit risk and equity risk) plus an operational risk charge and Pillar 2 will establish a framework whereby supervisors will require banks which have a higher risk profile relative to their capital to either reduce their risks or increase their capital. Pillar 3 will require banks to disclose more information about their risk profile to increase market discipline.

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