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THE GLOBAL IMPLEMENTATION OF BASEL II: PROSPECTS AND OUTSTANDING PROBLEMS

by

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ABSTRACT

Basel II may lead to far-reaching changes in the regulation and supervision of banks, risk management, and other aspects of banking practice; these changes may well be considered as one of the most important elements of the global financial system. This paper reviews prospects for the implementation of Basel II, risks due to the changes involved, and features which may affect international trade in banking services. The discussion on prospects summarizes data in a survey conducted by the Basel-based Financial Stability Institute (FSI) of supervisors in countries, which do not belong to the Basel Committee on Banking Supervision (BCBS). More than 90 countries participating in this survey have decided that they will implement Basel II, although the challenge to supervisors will be great as nearly a quarter of them to upgrade their skills. The discussion also covers other less systematic information, related to the implementation in member, as well as non-member countries of the BCBS, such as surveys of banks in developed countries and the impact of Basel II on capital requirements in the EU. Additional problems for implementation may result from disagreements between supervisory authorities in different countries as to the way in which Basel II should be implemented for banks with cross-border operations.

Basel II may prove a source of macroeconomic risks in many emerging-market countries owing to changes following its adoption in lender-borrower relations and in the way in which banks are supervised. Basel II incorporates the fundamental assumption that the relationship between a bank and its counterparties is conducted at arms-length. A different model of borrower-lender relations in many emerging-market countries, especially in parts of Asia, has involved practices such as policy or directed lending, relationship or name lending and collateral-based lending. In this model, loans are made on the basis of criteria different from those underlying Basel II and often resemble equity investments. Too rapid a change to the new model of banking practice of Basel II could undermine an economy's credit mechanism and could have adverse knock-on macroeconomic consequences.

Basel II coincides with the financial services negotiations, which form part of the WTO Doha round. The paper reviews somewhat inconclusive evidence on the relation between foreign banks' presence in selected emerging-market countries and prospects for implementation. Nevertheless, Basel II's effects on banks' costs via its rules for both overall regulatory capital and different categories of exposure will be a significant influence on the economic opportunities of foreign banks, and are thus likely to influence negotiating positions in the WTO.

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A. INTRODUCTION

The rules of 1988 Basel Capital Accord are now applied in more than 100 countries, having progressively assumed the role of a global standard. The agreement designed to replace it, Basel II, is much more complex – indeed, so complex that problems posed by its implementation have been a major focus of attention during the long process, including three consultative papers (CPs), which has led to its current version, *International Convergence of Capital Measurement and Capital Standards: a Revised Framework* (henceforth RF).[1] Thanks to a survey conducted by the Financial Stability Institute (FSI) of non-BCBS countries there is now systematic information concerning the views of supervisors in these countries as to the extent, character and timeframe of the implementation of Basel II, which can be combined with other information concerning likely implementation in BCBS member countries.[2] This information suggests that a large share of banking assets in most regions will be subject to the rules of Basel II by the end of the current decade. A complete account of the reasons for this relatively optimistic assessment is not available. However, the FSI survey contains a number of pointers and less systematic information from other sources furnishes the basis for a fuller, though still incomplete, picture of the reasons.

The changes both in the regulation and supervision of banks and in their risk management and other aspects of banking practice which will result from the implementation of Basel II are potentially so far-reaching that it may eventually be considered as one of the most important constituent elements of the global financial system. As a key standard it can be expected to affect rules governing the entry and operations of foreign banks and thus international negotiations on financial services such as those in the WTO. These consequences mean that the prospects for implementation have an interest which transcends their purely technical impact.

[1] The following earlier papers described in increasing detail the framework of the new rules as work proceeded: BCBS, *A New Capital Adequacy Framework* (Basel, 1999) (henceforth CP1); id., *The New Basel Capital Accord* (Basel, January 2001) (henceforth CP2), which was accompanied by seven specialized supporting documents; and Ibid., *The New Basel Capital Accord* (BIS, April 2003) (henceforth CP3).

[2] See FSI, "Implementation of the new capital adequacy framework in non-Basel Committee member countries", *Occasional Paper No. 4* (Basel: BIS, July 2004). (The FSI was created by the BIS and the BCBS in 1999 to assist financial supervisors through the provision of the latest information on financial products, practices and techniques and through the organisation of seminars and workshops.)

B. INCREASED FLEXIBILITY OF DEADLINES FOR IMPLEMENTATION AND OTHER FEATURES OF BASEL II

The CP1 of 2001, the first paper providing an overview of the main technical building blocks of Basel II, set the deadline for implementation as 2004. This qualified under the IRB approach (see Box 1) to the extent that during a three-year transition period starting at the end of 2004, banks would not be required to meet the data requirements for estimating the probability of default (PD).

In the event this timetable was to prove too demanding CP3 of April 2003 set a new deadline for implementation of the end of 2006 for a new accord finalized by the end of 2003. The change in the deadline was accompanied by greater flexibility regarding approaches and options. In CP2 banks meeting the supervisory conditions for adoption of the IRB approach for some of its exposures were expected to apply it to all their exposures over a short period of time. This requirement was now replaced by greater flexibility, under which banks could adopt "a phased rollout of the IRB approach" by, for example, adopting the IRB approach across asset classes within the same business unit or across business units within the same banking group, or moving from the foundation to the advanced version only for some inputs to risk-weighted assets. This flexibility could be expected to facilitate the adoption of the IRB approach by less sophisticated banks and was thus a feature that was likely to be applied in several developing countries. Similarly, under the regulatory capital charge for operational risk (see Box 1) partial use of the Advanced Measurement approach was now allowed, i.e. adoption of the approach for some parts of a bank's operations and the simpler Basic Indicator or Standardised approach for the rest. In CP2 there had been less flexibility regarding use of the most advanced option.

In the RF (issued in June 2004 rather than at the end of 2003) there are further changes in the direction of greater flexibility, including a relaxation of the timetable and more explicit acknowledgement of the problems confronting different national supervisors vis-à-vis implementation and the impact on the timetable for implementation of different countries' supervisory priorities. Moreover, even the change in title from *The New Basel Capital Accord* of CP2 and CP3 to *International Convergence of Capital Measurement and Capital Standards* is unlikely to be fortuitous, suggesting as it does a shift in emphasis away from the one-off act of signing up to a controversial blockbuster international accord towards a process likely to take considerable time. The BCBS has recognized that in many countries adoption procedures will require additional assessments of the impact of RF, as well as opportunities for comment by interested parties and national legislative changes. Nine countries from the G10, including Germany and the United States as well as at least one non-BCBS country, South Africa, have announced plans to conduct further national Quantitative Impact Studies (QIS4s). The BCBS itself recently announced that it would conduct a further study of the impact of the new rules on the capital of banks in 30 countries as a follow-up to its own QIS3 (whose estimates are discussed in section D).[3]

[3] See BCBS, "National impact studies and field tests in 2004 and 2005", February 2005; and J. Croft and P.T. Larsen, "Regulators exact fifth review of Basel 2", *Financial Times*, 14 March 2005.

Box 1. The alternative approaches and options of Basel II

In Basel II regulatory capital requirements for credit risk are calculated according to two alternative approaches, the Standardised and the Internal Ratings-Based (IRB). Under the Standardised approach the measurement of credit risk is based on external credit assessments provided by external credit assessment institutions (ECAIs), such as credit rating agencies or export credit agencies. Under the simplified Standardised approach RF assembles in one place the simplest options of the Standardised approach with the objective of simplifying choices for certain banks and supervisors. Under the IRB approach, subject to supervisory approval as to the satisfaction by the bank of certain conditions, banks would use their own internal rating systems to measure some or all of the determinants of credit risk. Under the foundation version banks calculate the probability of default (PD) on the basis of their own ratings but rely on their supervisors for measures of the other determinants. Under the advanced version of the IRB approach banks provide their own measures of all the determinants such as loss given default (LGD) and exposure at default (EAD).

For regulatory capital requirements for operational risk there are three options of progressively greater sophistication. Under the Basic Indicator approach the capital charge is a percentage of banks' gross income. Under the Standardised approach the capital charge is the sum of percentages of banks' gross income from eight business lines (or alternatively for two of the business lines of percentages of loans and advances). Under the Advanced Measurement approach, subject to the satisfaction by the bank of more stringent supervisory criteria, the capital is estimated by its own internal system for measuring operational risk.

After a preliminary review of its QIS4 regulators in the United States have announced that issuance of rules implementing Basel II will be delayed while they undertake further analysis. Their concerns are due to the scale of the reductions in regulatory capital shown by the exercise and to the dispersion of the changes among banks and among portfolio types (major categories of lending and other exposures or positions). The additional analysis will focus on the extent to which these results reflect genuine variations in risk and will serve as a basis for deciding whether further adjustments of Basel II are still required.[4]

Conscious of the hurdles still to be cleared, the BCBS has proposed that the finalized version of the RF will be available at the end of 2006 and accepts that the transition period for implementation of the more advanced approaches of Basel II, during which further impact studies of these approaches may be conducted, should continue until the end of 2008. Moreover, since the adoption of Basel II may not be the authorities' first priority in many non-G10 countries, the BCBS also accepts that timetables in several countries will differ from that envisaged in RF.

[4] See Board of Governors of the Federal Reserve System. Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, and Office of Thrift Supervision, "Banking agencies to perform additional analysis before issuing Notice of Proposed Rulemaking related to Basel II", Joint Press Release, 29 April 2005.

C. ADOPTION AND TIMETABLE FOR IMPLEMENTATION

1. BCBS and other EU countries

By participating in the drafting of Basel II BCBS countries can be assumed to have signalled their willingness to implement the agreement, though in some cases partially. So far only the United States is publicly holding out against full implementation. BCBS countries which are members of the EU along with other EU countries will adopt regulatory capital requirements which closely resemble those of Basel II as part of new legislation proposed by the European Commission. The remaining BCBS countries are Canada, Japan and Switzerland.

- Regulatory agencies in the *United States* are proposing that a core set of banks with foreign exposure above a threshold amount be required to adopt Basel II and have prescribed for this purpose the advanced version of the IRB approach for credit risk and the Advanced Measurement Approach for operational risk. These banks account for 99 per cent of the foreign assets and two-thirds of all the assets of the country's banks. It will also be open to other banks to adopt Basel II on the condition that they meet the conditions of eligibility for these two approaches. In the near term several other banks with assets of more than $25 billion are also expected to adopt Basel II. United States regulators consider that most of the country's other banks have generally straightforward balance sheets which do not need the sophisticated infrastructure of risk management required by Basel II. Moreover, such banks for the most part currently have capital significantly excess of the 8 per cent of risk-weighted assets prescribed by the Basel Accord of 1988. This decision is not in conflict with the provisions of Basel II. Although the new accord is clearly designed for banks and banking systems worldwide at several levels of sophistication, the institutions actually specified as within the scope of application are internationally active banks.

- Nine of *EU* member countries are represented on the BCBS – Belgium, France, Germany, Italy, Luxembourg, Netherlands, Spain, Sweden and the United Kingdom. Along with the 16 other member countries, Austria, Czech Republic, Cyprus, Denmark, Estonia, Finland, Greece, Hungary, Ireland, Latvia, Lithuania, Malta, Poland, Portugal, Slovak Republic and Slovenia, these countries will all adopt rules closely resembling those of Basel II as part of the new framework of capital requirements for banks and investment firms proposed by the European Commission in July 2004. The new framework will apply to all "credit institutions" (principally banks but also other institutions such as credit cooperatives which receive deposits and other repayable funds from the public and make loans for their own account) and investment firms. Special adaptations of Basel II rules in the European Commission's new framework provide for greater flexibility regarding the selection of more sophisticated approaches and options, simpler rules for the capital charges for operational risk for low- and medium-risk investment firms, rules regarding the cross-border coordination between supervisors where there are disagreements concerning the validation of different approaches and options (discussed further below) and special provisions for venture capital.

However, except in the case of the banks in the United States which will adopt Basel II in compliance with regulatory instructions, information regarding the approaches and options which other banks will choose is still fragmentary. A recent survey conducted for Accenture, Mercer Oliver Wyman, and SAP (henceforth A-MOW-SAP survey) indicated that 57 per cent of European banks with assets of more than $100 billion were intending to adopt the advanced version of the IRB approach by 2007 and another 26 per cent by 2010. Of banks with assets in the range of $25-100 billion 14 per cent were targeting adoption of the advanced version of the IRB approach by 2007 and another 57 per cent by 2010.[5] This information broadly confirms the results of earlier surveys of banks in London, which indicated that up to 90 per cent of them were expecting to adopt the IRB approach, and that a large majority of them expected to choose the advanced version.[6] The first of these surveys is less detailed regarding the choice of options for the capital charge for operational risk: banks covered mostly intend initially to adopt the Standardised or Advanced Measurement approaches, and then shift increasingly towards the latter by 2010, but a regional breakdown of the figures is not provided.

The FSI survey mentioned above[7] includes non-BCBS EU countries. As discussed in the next section, these point to widespread adoption of Basel II and the choice of the IRB approach by banks accounting for about 50 per cent of assets by the end of the current decade. However, the questionnaire does not make it possible to make a distinction between EU and non-EU banks in this group.

Miscellaneous information is also available as to the expectations of regulators (in addition to that discussed below for non-BCBS countries). In Germany, for example, as wide as possible adoption of the IRB approach is likely to be encouraged.[8] In Switzerland banks other than the two largest are expected to adopt the Standardised approach.[9] The challenge to regulators (discussed below for non-BCBS countries…) will be considerable. In the United Kingdom, for example, implementation of Basel II and the new EU rules will require a huge amount of work if the deadlines of the end of 2006 for the Standardised approach and the foundation version of the IRB approach and of end of 2007 for the advanced version of the IRB approach are to be achieved.[10]

2. Non-BCBS countries[11]

The FSI questionnaire on the implementation plans of Basel II was sent to authorities in 115 jurisdictions, 93 per cent (or 107) responded. Response rates for different regions varied between 88 per cent for Africa and the Caribbean and 95 per cent for non-BCBS Europe. The survey was completed before the decision of the BCBS (discussed in section B) to extend the timetable for implementation of the IRB approach from the end of 2006 to the end of 2007. The extension will have an effect on countries' plans but since the main features of Basel II had been agreed at the time when the survey was undertaken,

[5] See "Reality check on Basel II ", special supplement to *The Banker*, July 2004, pp. 154-155
[6] See "Basel II a new competitive landscape", special supplement to *The Banker*, October 2003, pp. 8-9, and "Basel II - a risky business", special report in *Financial World*, September 2003, p. 12.
[7] See note 2.
[8] See K.C.Engelen, "Why Schröder is ready to shoot down Basel II", *Central Banking*, XII (33), 2002, p. 99.
[9] See J-C. Pernollet, "Les effets de Bâle II sur les banques suisses", *PricewaterhouseCoopers Flash Financial Services*, décembre 2004, p. 4.
[10] See Institute of International Bankers, *Global Survey 2004* (New York: IIB, September 2004), p. 147.
[11] Unless otherwise specified, the data in section C.2 is from FSI, *op. cit.* at note 2.

Non-BCBS Europe

Number of respondents: 37 of which 34 intend to adopt Basel II

Percentage of banking assets expected to be covered in total[12] and by different approaches and options of Basel II [13] (a) for all respondents, and (b) excluding the country with the greatest banking assets:

Credit risk		**total**	***of which***	**SA/SSA**	**IRBF**	**IRBA**
end-2006:	(a)	72		26	36	9
	(b)	65		25	29	11
end-2009:	(a)	82		30	39	14
	(b)	78		30	32	16

(*Credit risk*		**total**	***of which***	**SA/SSA**	**IRBF**	**IRBA)**
end-2015:	(a)	87		33	28	26
	(b)	84		35	27	22

Operational risk		**total**	***of which***	**BIA**	**SA**	**AMA**
end-2006:	(a)	71		36	33	2
	(b)	65		37	26	2
end-2009:	(a)	82		40	36	6
	(b)	78		41	32	5
end-2015:	(a)	87		39	39	9
	(b)	84		41	34	9

the overall picture in the survey probably stands, even though the dates of the different stages of expected implementation may be subject to revisions.

The percentages above are weighted averages of the percentages for the different respondent countries, the weights being their banking assets. Owing to the possibility that the percentages under (a) may be skewed by the percentages for respondents with particularly large banking assets for each group in the analysis which follows, the respondent with the greatest banking assets is excluded under (b) – for non-BCBS Europe with effects that do not point to a major distortion due to

[12] The totals of the FIS survey differ, in some case substantially, between the Annex tables giving only the proportions of different regions banking assets expected to be subject to Basel II and those which also specify the distribution of the totals by approaches to credit risk and options for operational risk. The data below are those where distributions by approaches and options are also specified.

[13] Under credit risk SA/SSA stands for Standardised or Simplified Standardised approach; IRBF for the foundation version of the IRB approach; IRBA for the advanced version of the IRB approach. Under operational risk BIA stands for Basic Indicator approach; SA for both alternatives of the Standardised approach; and AMA for the Advanced Measurement approach.

the inclusion of this respondent. Fifteen of the respondents in this group are EU members so that the remarks in section C.1 concerning implementation under the new EU rules for the capital of financial institutions apply to them.

Two other points are noteworthy for this group.

- *Replies concerning implementation differed markedly according to whether the respondent belonged to Group 1 (22 countries which are members of the EU, have announced plans to implement Basel II at the end of 2006, or have total banking assets greater than $50 billion) or to Group 2 (the remaining 15).* Of the Group 1 respondents 80 per cent expected to implement Basel II by the end of 2006, 90 per cent by the end of 2009, and 94 per cent by the end of 2015, whereas the corresponding proportions for Group 2 were 0, 73 and 74 per cent, respectively. The proportion of banking assets covered by SA/SSA was significantly higher for Group 2 than for Group 1 – more than 45 per cent for Group 2 as against 30 per cent for Group 1 at the end of 2009 – and of banking assets covered by IRBF significantly lower – 6 per cent as against 39 per cent at the end of 2009.

- Much of the increase in banking assets covered by IRBA in the period 2010-2015 is attributable to shifts of banks from IRBF.

Africa

Number of respondents: 22[14] of which 16 intend to adopt Basel II

Percentage of banking assets expected to be covered in total and by different approaches and options of Basel II (a) for all respondents, and (b) excluding the country with the greatest banking assets:

Credit risk		**total**	***of which***	**SA/SSA**	**IRBF**	**IRBA**
end-2006:	(a)	58		11	43	4
	(b)	21		18	3	0
end-2009:	(a)	79		30	36	13
	(b)	61		55	5	1
end-2015:	(a)	89		28	35	25
	(b)	79		51	25	3
Operational risk		**total**	***of which***	**BIA**	**SA**	**AMA**
end-2006:	(a)	58		10	35	12
	(b)	21		17	3	0
end-2009:	(a)	67		15	20	32
	(b)	39		27	11	0
end-2015:	(a)	87		25	19	44
	(b)	76		46	27	3

[14] Two of the respondents were the Central African Banking Commission which consists of Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea and Gabon; and West African Economic and Monetary Union which consists of Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo.

Comparison of rows (a) and (b) shows that the figures for all respondents are strongly skewed by those countries with the largest banking assets, which is not identified by name in the FSI survey but can be presumed to be South Africa (see Box 3). If this country is excluded, not only are the banking assets expected to be subject to Basel II substantially reduced but so are those to which the IRB approach and the more advanced options for the capital charges for operational risk are to be applied. Comparison of the figures for credit and operational risk for the end of 2009 indicates that implementation of the capital charges for credit risk is expected to be quicker during the earlier years covered by the survey than of those for operational risk.

Asia

Number of respondents: 18 of which 15 intend to adopt Basel II

Percentage of banking assets expected to be covered in total and by different approaches and options of Basel II (a) for all respondents, and (b) excluding the country with the greatest banking assets:

Credit risk		**total**	***of which***	**SA/SSA**	**IRBF**	**IRBA**
end-2006:	(a)	30		15	9	7
	(b)	49		24	14	11
end-2009:	(a)	62		22	32	8
	(b)	62		36	14	13
end-2015:	(a)	62		20	34	8
	(b)	63		33	18	13
Operational risk		**total**	***of which***	**BIA**	**SA**	**AMA**
end-2006:	(a)	30		7	12	11
	(b)	49		12	19	18
end-2009:	(a)	62		39	11	12
	(b)	62		25	18	20
end-2015:	(a)	62		39	11	12
	(b)	63		25	18	20

Comparison of rows (a) and (b) again shows that the figures for all respondents are strongly skewed by those of the country with the largest banking assets, which is not identified by name in the FSI survey but is presumably China (see Box 3). If this country is excluded, the banking assets expected to be subject to Basel II are substantially increased. China has declared that it will not apply Basel II, a decision in which it was initially joined by India. More recently India announced a change in its policy (see Box 2).

The countries intending to implement Basel II fall into two groups. In the first, consisting of five countries, most banking assets (90 per cent) are expected to be covered by Basel II as early as the end of 2006, and the remainder by the end of 2009. In the second group which consists of 8 countries with the most important banks and almost 70 per cent of total banking assets are expected to be covered by the end of 2009 but no further extension of coverage is expected in 2010-2015. The third group, presumably China and four other countries with small banking sectors, do not expect that a significant proportion of their banking assets will be subject to Basel II during the entire period until 2015. The main change during 2010-2015 in jurisdictions where Basel II is expected to be widely applied is a shift in assets covered by SA/SSA to IRBF.

Other information concerning recent regulatory developments noteworthy in the context of Basel II in the region includes the following:[15]

- In *Australia* Basel II is to apply to all authorized deposit-taking institutions except branches of foreign banks to which regulatory capital requirements are not applied on a stand-alone basis.

- In the *Philippines* regulatory capital requirements for market risk based on the 1996 amendment of the 1988 Basel Capital Accord[16] have recently been adopted.

- In *Singapore* regulatory capital requirements for locally incorporated banks based on the 1988 Basel Capital Accord have been lowered and some of the rules for their computation revised.

Box 2. Basel II in China and India

China has announced that the capital requirements regime for its banks will continue to be that of the 1988 Basel Capital Accord. A revised version of rules based on this Accord was announced in February 2004 and is to be fully implemented by January 2007.[17] Shifting to new rules soon after the implementation of this revised version would clearly impose considerable costs on both banks and supervisors. The high levels of non-performing loans (NPLs) among the assets of the Chinese banks would also make application of Basel II complex, since the authorities would have to decide on a solution to the problem of these NPLs which did not involve too great an increase in interest rates due increased provisioning or a collapse of credit to particular sectors and firms.

After initially stating their intention to remain with the 1988 Basel Capital Accord the Indian authorities have more recently stated that they would apply Basel II. In February 2005 the Reserve Bank of India announced that all Indian banks would have to adopt the Standardised approach for the capital requirements for credit risk and the Basic Indicator approach for the capital requirements for operational risk. Eventual migration to the IRB approach would be permitted as supervisors and banks themselves developed adequate skills.[18]

[15] See Institute of International Bankers, *op. cit.* at note 9, pp. 42, 110, and 129.
[16] See BCBS, *Amendment of the Capital Accord to Incorporate market Risks* (Basel, January 1996).
[17] See Institute of International Bankers, *op. cit.* at note 9, pp. 57-58
[18] *Indian Express Newspapers (Bombay) Ltd.*, 15 February 2005.

Caribbean

Number of respondents: 7 of which 5 intend to adopt Basel II

Percentage of banking assets expected to be covered in total and by different approaches and options of Basel II (a) for all respondents, and (b) excluding the country with the greatest banking assets:

Credit risk		**total**	***of which***	**SA/SSA**	**IRBF**	**IRBA**
end-2006:	(a)	0		0	0	0
	(b)	0		0	0	0
end-2009:	(a)	23		21	0	2
	(b)	87		78	0	9
end-2015:	(a)	24		21	0	2
	(b)	89		79	1	9
Operational risk		**total**	***of which***	**BIA**	**SA**	**AMA**
end-2006:	(a)	0		0	0	0
	(b)	0		0	0	0
end-2009:	(a)	23		21	2	0
	(b)	87		78	8	1
end-2015:	(a)	24		21	2	0
	(b)	89		79	9	1

Comparison of rows (a) and (b) shows that the percentage of total banking assets in the Caribbean which will be subject to Basel II is sharply skewed by the absence among implementing countries of that with the largest banking assets, which is not identified by the FSI but is presumably the Cayman Islands (see Box 3). The decisions of the countries not expecting to implement Basel II do not appear definitive: in their replies to the FSI they refer to the need for further studies of the quantitative impact on both their banks and their supervisors.[19]

One possible explanation of the unwillingness of the Cayman Islands (and possibly of the other non-implementing respondent in the FSI survey) to commit itself to implementing Basel II at this stage may be the special features of the operations and supervision of banks in offshore financial centres. A substantial part of the business of such banks consists of fiduciary services, that is services where the bank acts as agent rather than as a principal for its customers under an arrangement similar to an investment management contract.[20] A well known

[19] Concerning consultations on Basel II between the Monetary Authority of Cayman Islands and the country's Banker's Association see also Institute of International Bankers, *Global Survey 2003*, p. 50.

[20] Concerning fiduciary services see J. Hitchins, M. Hogg and D. Mallet, *Banking: a Regulatory and Accounting Guide* (London: Institute of Chartered Accountants in England and Wales, 2001), pp. 272, 526 and 546.

example of such services is the provision of fiduciary deposits under which a bank lends a customer's money at the customer's and not its own risk. Such services generally expose the bank to very limited credit and market risk. However, they do involve the fiduciary risk that the bank carries out the customer's instruction in a negligent or unprofessional way, thus exposing the institution to claims for damages and loss of reputation. Fiduciary risk in turn is connected to operational risk which is due to failures of internal processes, staff or systems or to the impact of certain external events (and which is covered by Basel II). Thus, many fiduciary services fit more easily into the new EU rules (which, as noted in section C.1, explicitly cover investment firms) than into Basel II. The importance of their fiduciary operations may also explain the preference of banks in countries in this group expecting to implement Basel II for the simpler approaches and options, since the conditions for using the IRB approach and the more advanced options for setting the capital charges for operational risk may be more difficult to meet for such operations.

Latin America

Number of respondents: 15 of which 11 intend to adopt Basel II

Percentage of banking assets expected to be covered in total and by different approaches and options of Basel II (a) for all respondents, and (b) excluding the country with the greatest banking assets:

Credit risk		**total**	***of which***	**SA/SSA**	**IRBF**	**IRBA**
end-2006:	(a)	19		2	16	0
	(b)	36		4	31	0
end-2009:	(a)	85		33	46	5
	(b)	71		26	34	10
end-2015:	(a)	95		41	23	31
	(b)	90		42	35	13
Operational risk		**total**	***of which***	**BIA**	**SA**	**AMA**
end-2006:	(a)	19		2	16	0
	(b)	36		4	31	0
end-2009:	(a)	85		22	57	6
	(b)	71		6	53	11
end-2015:	(a)	95		32	32	30
	(b)	90		25	54	12

Comparison of rows (a) and (b) indicates that both the percentage of banking assets subject to Basel II and their coverage by different approaches and options are significantly affected by the inclusion or exclusion of the country with the largest banking assets, which is not identified by the FSI, but is presumably Brazil (see Box 3).

Among Latin American countries intending to implement Basel II the FSI distinguishes three groups.

- Group 1, consisting of 6 countries, expects that the percentage of banking assets subject to Basel II will be 100 per cent by the end of 2009. Almost 60 per cent of banking assets will be subject to IRBF and most of the rest to SA/SSA. During 2010-2015 significant drift is expected from IRBF to IRBA.

- Group 2, consisting of 5 countries, expects that the effects of the implementation of Basel II will be mostly evident in 2010-2015, and the preferred approach to capital charges for credit risk will be SSA, although a little than 20 per cent of banking assets will be subject to IRBA.

- The remaining four countries in Group 3 are currently undecided as to whether to implement Basel II, this is either because of the limited involvement of their banks in cross-border activities or because they wish to carry out further analysis of the impact of Basel II.

Argentina is presumably included in one of the two groups which have decided to implement Basel II in view of the scale of its banks' assets and the high proportion of assets which will eventually be subject to Basel II among Latin American respondents to the FSI survey. However, the country has recently been undertaking a large-scale revision of its regulations concerning the capital and risk management of its banks in the aftermath of measures taken in response to the financial crisis and default of 2001; this revision may affect the speed with which it will implement Basel II.[21]

Middle East

Number of respondents: 8 of which 7 intend to adopt Basel II

Percentage of banking assets expected to be covered in total and by different approaches and options of Basel II (a) for all respondents, and (b) excluding the country with the greatest banking assets:

Credit risk		**total**	***of which***	**SA/SSA**	**IRBF**	**IRBA**
end-2006:	(a)	4		4	0	0
	(b)	6		6	0	0
end-2009:	(a)	73		36	37	0
	(b)	63		50	13	0
end-2015:	(a)	76		33	43	0
	(b)	67		45	21	0
Operational risk		**total**	***of which***	**BIA**	**SA**	**AMA**
end-2006:	(a)	4		4	0	0
	(b)	6		6	0	0
end-2009:	(a)	73		36	37	0
	(b)	63		50	13	0
end-2015:	(a)	76		35	40	2
	(b)	67		48	17	2

[21] On recent changes in Argentinean bank regulations see Institute of International Bankers, *op. cit.* at note 10, pp. 33-34.

Comparison of rows (a) and (b) indicates that exclusion of the country with the largest banking assets, which is not identified by the FSI but is presumably Saudi Arabia (see Box 3) affects most importantly the distribution of the coverage of banking assets to be covered by Basel II among the alternative approaches and options for setting capital charges for credit and operational risk, lowering the percentages for the more advanced countries. The percentages for implementation are broadly in accord with optimism expressed in a 2002 survey in *The Banker* as to the capacity of banks and supervisors in the region to implement Basel II reasonably quickly.[22] According to more specific information for Bahrain the authorities will commence in 2005 the work required for implementation from 2008 onwards.[23]

Box 3. The identity of selected countries having a significant impact on implementation data in the FSI survey

Africa

Information on the assets of African banks available in *The Banker* indicates that those of South African banks dwarf those of institutions from other countries in the region. All five of the largest banks by value of assets in a 2003 survey of the top 100 banks of sub-Saharan Africa were South African. Their assets ranged from $22 to $45.1 billion. The assets of the next largest bank (from Nigeria) were $3.2 billion, and all but 14 of the banks included in the survey had assets of less than $1 billion.[24] Two of the respondents to the FSI questionnaire, Egypt and Libya, were not represented in this survey of *The Banker,* but were included in a 2002 survey of the top 100 Arab banks.[25] One Egyptian bank had assets of a size ($22.6 billion) comparable to those of the five South African institutions, another had assets of more than $10 billion. The assets of the largest Libyan bank were estimated at $8.8 billion.

Asia

Information on the assets of Asian banks in *The Banker* indicate that those of Chinese banks were the largest by a considerable margin.[26] All four of the largest banks by value of assets in a 2004 survey of the top 200 banks in the region were Chinese; Chinese banks accounted for 39 per cent of the aggregate assets of banks included (percentage close to that of banking assets not expected to be covered by Basel II at the end of 2009 and of 2015. Australia was the country whose banks accounted for the next largest share of aggregate assets – 14 per cent.

.../...

22 See *The Banker*, November 2002, p. 88.

23 See Institute of International Bankers, *op. cit.* at note 9, p. 45.

24 See *The Banker*, December 2003. Not all the offices of foreign banks with a presence in the region are represented in the survey but this omission would not change the picture regarding the relative size of South African institutions.

25 See *The Banker*, November 2002.

26 See *The Banker*, October 2004.

Box 3. The identity of selected countries having a significant impact on implementation data in the FSI survey (concluded)

Caribbean

In the absence of reasonably comprehensive and comparable data for major offshore financial centres in the Caribbean identification of the country with the largest banking assets is a little less straightforward. One approach is to use the data in BIS, *International banking and financial market developments: BIS Quarterly Review* on the unconsolidated liabilities to banks in Caribbean countries of banks reporting to the BIS (a figure which amounts to a large part of the cross-border assets of Caribbean banks). Of the respondents to the FSI questionnaire only Bahamas, Barbados, Cayman Islands, Jamaica and Trinidad and Tobago are covered by the BIS-reporting banks, British Virgin Islands and St. Kitts and Nevis are omitted from this list. As of March 2004 Cayman Islands accounted for 76 per cent of the liabilities of BIS-reporting banks, a percentage close to that for banking assets of Caribbean respondents which will not be covered by Basel II.[27]

Latin America

Information on the assets of Latin American banks in *The Banker* indicate that those of Brazilian banks were the largest.[28] In a 2003 survey of the top 100 Latin American banks five banks from both Brazil and Mexico had assets in excess of $10 billion but the total assets of banks in the top 100 amounted to $221 billion for the former and to $146 billion for the latter. The total assets of banks in the top 100 from Argentina, another country mentioned in the text above, amounted to $64 billion.

Middle East

Information on the assets of Arab banks in *The Banker* indicate that among the respondents in the Middle East in the FSI survey banks in Saudi Arabia had the largest assets.[29] In a 2002 survey of the top 100 Arab banks the assets of those of Saudi Arabia ($124 billion) were more than twice those of Bahrain ($60 billion) and of United Arab Emirates ($54 billion).

[27] See, for example, BIS, *International banking and financial market developments: BIS Quarterly Review*, September 2004, tables 6A and 6B.
[28] See *The Banker*, August 2003.
[29] See *The Banker*, November 2002.

D. FORCES AFFECTING THE PACE OF IMPLEMENTATION

The data from the FSI survey indicate that within less than a decade the regulatory authorities of the countries responsible for most global banking activity expect to implement Basel II. This timetable accords with the spirit of the greater flexibility regarding the timetable for implementation now accepted by the BCBS itself, as described in section B. In view of the far-reaching character of Basel II the factors driving or slowing its implementation are inevitably of great interest. Here, no doubt as a result of the mandate which determined its contents, the FSI survey, while useful, provides information on only a few of these factors. To achieve a fuller but still preliminary picture of these factors there is no alternative but to fall back on more fragmentary material, whose interpretation sometimes requires guesswork. But consideration of such material has the advantage of drawing attention to problems which may be especially important to some developing countries or regions.

Planning and resources

The pace of implementation of Basel II will be crucially affected by the planning undertaken and by resource constraints among supervisors and banks themselves. These processes are mutually dependent in several ways. The planning process, for example, will be affected by the scale of the resources devoted to it and the plans themselves must take account of the resources available for their implementation. Similarly, the state of banks' preparedness will determine not only their capacity to implement Basel II but also their supervisors' validation of their plans and their choices on the approaches and options for setting capital charges for credit and operational risk.

The FSI survey has information on planning processes and resource requirements, but for supervisory authorities and not for banks. On planning processes its findings include the following:

- Of respondents from non-BCBS Europe 50 per cent had developed internal plans for the implementation of Basel II.

- Of African respondents 13 of 22 had not yet developed internal plans for the implementation.

- The majority of Asian respondents had already developed plans for implementation.

- Only 2 of the 7 Caribbean respondents had formulated plans for implementation.

- Eighty per cent of Latin American respondents had not yet developed plans for implementation. However, of the countries expecting 100 per cent of their banking assets to be subject to Basel II by 2009 (Group 1 – see section C.2) 50 per cent had formulated such plans, whilst none of those expecting most of the implementation of Basel to take place during 2010-2015 (Group 2) had such plans.

- Six of the 7 respondents in the Middle East expecting to implement Basel II had developed plans for implementation.

Respondents to the survey in all of the regions acknowledged the formidable challenge posed by Basel II with respect to the upgrading of the skills of supervisory staff. This is evident in their expectations as to the number of supervisory staff requiring training on topics related to Basel II. *Such training was to be provided to 9,366 (24 per cent) of 38,529 total supervisory staff in the countries covered.* However, the percentages varied by region and with the total number of supervisory staff: in Africa, Caribbean, Latin America and the Middle East the percentages of supervisory staff expected Basel II-related training were in the range of 60-80 per cent, while in Asia, where two-third of supervisors in respondent countries are located, only 14 per cent was expected to receive Basel II-related training. Highest priority for assistance in such training was attributed to the setting of capital charges for credit risk (both the Standardised and IRB approaches) and to supervisory review intended to ensure that banks had adequate capital and sound techniques of risk management.

Implementation of Basel II will also involve extensive planning and a large commitment of resources by banks.

- An A-MOW-SAP survey (mentioned in section C.1) indicates that a large majority of banks with assets of more than $25 billion in Europe intend to implement the advanced version of the IRB approach by 2010.[30] Similarly, a high proportion of banks with assets of this size have the same intentions in Canada and Australia, and even in the United States (where the largest banks are expected by the regulatory authorities to adopt this approach by 2007) more than 50 per cent also expect to follow suit by 2010. Only in Japan was a much smaller proportion of banks (9 per cent) expecting to adopt the advanced version of the IRB approach by 2010.

- Of banks with assets greater than $100 billion 60 per cent expect to spend 50 million Euros on meeting Basel II requirements and one-third more than 100 million Euros. Most banks with assets in the range $25-100 million expect to spend less than 50 million Euros.

- European banks are furthest advanced in their planning for Basel II: almost 80 per cent of European banks covered by the survey had completed strategic assessments of the impact of Basel II, while the corresponding proportion in North America was less than half of this.[31]

A substantial proportion of the costs of implementing Basel II (40-80 per cent for the majority of banks covered by the survey) is due to information technology. These costs are being incurred at the same time as those due to other major changes in banks' regulatory environment such as the new requirements for corporate governance and internal controls mandated by the United States Sarbanes-Oxley Act and revised International Financial Reporting Standards.

According to the A-MOW-SAP survey 75-80 per cent of banks with assets greater than $25 billion in Asia (other than Japan) and in Brazil and South Africa intend to adopt the advanced version of the IRB approach by 2010. These proportions are markedly higher than those for the same regions in the FSI survey discussed in section C. This no doubt reflects differences in the coverage of the two

[30] See *op. cit.* at note 5.

[31] Significant progress in preparations for Basel II is not limited to the banks of EU countries. According to the Croatian National Bank, for example, 88 per cent of the country's larger banks (with assets of more than $868 million) have already started preparations and are expected to comply fully with Basel II requirements by 2010. See "Croatia – on the accession path", *The Banker*, March 2005, p.98.

questionnaires: that of the FSI was directed to supervisors and was not restricted to institutions above a certain size, whereas those of A-MOW-SAP were directed at senior executives responsible for implementing Basel II in banks with assets above $25 billion. Moreover, it is not clear whether the A-MOW-SAP survey includes China, the country in the region with the largest number of banks with assets greater $25 billion according to the survey cited in Box 3, which is not currently intending to adopt Basel II.

Cross-border supervisory cooperation

The framework of consolidated supervision through which Basel II is to be applied is a potential source of difficulties for, and thus may slow, implementation. This could be the case if the supervisor of an international bank in its parent country and that of a subsidiary or branch in a host country apply different rules. The parent supervisor might approve the bank's adoption of the IRB approach, while the host supervisor might prescribe the Standardised approach for banks subject to its supervision owing to limitations on its supervisory capacity. In these circumstances, owing to fears about adverse competitive effects on domestic banks due the lower capital requirements and thus the lower costs associated with the IRB approach, it might well be unwilling to allow the foreign entity to use this approach (and thus also to entrust supervision of its capital to the parent supervisor).

The Basel Concordat of 1983, which is intended to provide guidelines for cooperation between national supervisors in the application of Basel II, prescribes a different distribution of supervisory responsibilities for a cross-border banking subsidiary, on the one hand, and for a cross-border branch, on the other. In the case of the subsidiary (a wholly or majority-owned legally independent institution incorporated in the host country) the host supervisor would be acting in accordance with its rights under the Concordat if it insisted on the Standardised approach even when the supervisor of the parent bank had authorized its use of the IRB approach. However, its insistence would impose on the parent bank and the supervisor in its parent country the burden (and additional cost) of integrating the subsidiary's use of different approaches in different countries into the consolidated management and accounting framework of its operations. In the case of a branch (an entity which is an integral part of its foreign parent and does not have separate legal status) primary responsibility for the supervision of solvency (which includes capital) is attributed to the parent supervisor. This guideline does not accommodate the case in which a bank's parent supervisor has accepted its use of the IRB approach but the host supervisor in the country of one of its branches has decided that banking entities in its jurisdiction should use the Standardised approach, so that cross-border disagreements would have to resolve on another basis.

Although differences between supervisors are thus capable of complicating implementation of Basel II and of increasing it costs, it is difficult to predict how important these differences will prove to be.

- In the EU the principles of mutual recognition and home country control accord primary authority to the parent supervisor in the case of branches, and the application process for its new framework of capital rules – including authorization of different approaches and options – will be carried out by the "consolidating supervisor", i.e. the supervisor with the primary responsibility for supervision of a cross-border banking group. Thus, within the EU the rules themselves are not a source of difficulties, although this does not guarantee that they will necessarily be straightforward to apply.

- The difficulties due to the rules of the 1983 Basel Concordat as to the distribution of supervisory responsibilities for foreign branches may be attenuated up to a point. Subsidiaries are the form most commonly found for foreign banks undertaking the retail operations for which fears as to the adverse competitive effects on domestic banks are most likely to weigh more heavily. As already noted, for subsidiaries insistence by host supervisors on the Standardised approach would be in accordance with Concordat's distribution of responsibilities. Branches are the form more commonly used for foreign institutions undertaking wholesale banking for which fears about competition tend to be less important, so that difficulties regarding the cross-border application of Basel II may be easier to resolve. But this leaves the problem of the additional costs which may result from different ways in which parent and host supervisors decide to apply Basel II in the case of subsidiaries. Available evidence indicates that in many countries the norm is equal applicability of prudential standards to domestic and foreign banks.[32] Thus difficulties regarding the implementation of Basel II which are due to divergences between supervisory regimes and consequent cross-border disagreements will disappear only as these divergences become less frequent with expansion of the use of IRB approach.

Requirements for and choice of approaches

While adoption of Basel II *per se* requires that a bank has to fulfil minimum supervisory requirements on such matters and internal controls and risk measurement, the choice of its more advanced approaches and options depends on its ability to meet more stringent conditions. A notable feature of the FSI survey is the expectation that the most widely used approach for setting capital charges for credit risk for non-BCBS countries will not be the simplest Standardised approach but the foundation version of the IRB approach. This conclusion holds at the aggregate level where, for example, 32-33 percent of bank assets are expected to be covered by this approach by 2009 in comparison with a little more than 25 per cent for the Standardised or simplified Standardised approaches and less than 10 per cent for the advanced version of the IRB approach. At the regional level a similar expectation as to the different approaches holds for Asia and Latin America, though the coverage of bank assets by the foundation version of the IRB approach is lower elsewhere. This outcome must reflect reasonable expectations as to eligibility and the weighing of the incentives of the IRB approach in terms of lower regulatory capital requirements (discussed below) against the additional costs involved.[33]

Eligibility for the IRB approach under Basel II is determined by several different dimensions of a bank's management and internal controls. But particularly interesting in the context of the choice of approach to

[32] See, for example, the survey of equal applicability of prudential standards to domestic and foreign banks in I. Song, "Foreign bank supervision and challenges to emerging market supervisors". *IMF Working Paper WP/04/82*, May 2004, Appendix VI, that covers 24 of the countries in the FSI survey in only 3 of which is there any question as to the equal applicability of prudential standards to domestic and foreign banks.

[33] Interpretation of these figures is complicated by the absence of information as to how coverage by different approaches is classified. For example, if a bank uses a version of the IRB approach for some but not all of its categories of exposure, are all of its assets treated as being covered by that approach or only the categories in question?

setting capital charges for credit risk are the quantitative requirements as to the bank's rating system and the availability of certain data and its usability for estimating LGD and EAD (see Box 1).

- The bank must have been using a rating system broadly in line with the requirements of the RF for at least three years prior to qualifying for the IRB approach.
- The length of the observation period for the data used for the bank's estimation of PD must be at least five years.
- The length of the observation period for the data used to estimate LGD and EAD must be at least seven years, except for retail exposures for which the period is five years.

The replies in the FSI survey do not specify the categories of business which would be covered by the different approaches. But it is possible to hazard a guess as to reason why so many countries expect the foundation version of the IRB approach to be the most widely used. Intuitively one would expect that data availability would be greatest for PD, and that benchmarking, the comparison a bank's internal ratings with external information such as that provided by rating agencies, would also most likely to be feasible for PD.[34] This argument may apply *a fortiori* to data on retail exposures.

Likewise, it seems a reasonable conjecture that both data availability and internal estimation are likely to pose greater problems for LGD and EAD, components of the formula for the estimates of risk-weighted assets to be undertaken by the bank in the advanced version of the IRB approach. The development of LGD estimation methods is still at an early stage and empirical research has been largely limited to the bonds of United States corporations.[35] Reliable procedures for internal estimates of LGD also require clear definitions of default and clear rules for valuing collateral. Neither of these requirements will be met if insolvency regimes are antiquated or especially favourable to debtors, as is often true of those in developing countries. Lack of relevant experience is also a source of problems for internal estimates of EAD.[36] One of problems here concerns estimates of the future use or draw-downs of unused credit or other facilities, which, for example, include the difficulty of forecasting how the relationship between the bank and its customers will evolve in adverse circumstances.[37]

The influence of foreign banks

The FSI survey draws special attention to the role of foreign banks in the implementation of Basel II, going so far as to characterize them as "major drivers" of the process in several regions.[38] In view of the attention paid to the presence of foreign banks in the context of financial liberalization and of the negotiations on financial services in the WTO this point is worth examining in greater detail. The FSI percentages of total banking

[34] Concerning the use of benchmarking see V. Oung, "Benchmarking", in BCBS, *Studies on the Validation of Internal Rating Systems*, Working Paper No. 14 (Basel: BIS, February 2005).
[35] See R.L. Bennett, E. Catarineu and G. Moral, "Loss given default validation", in *ibid.*
[36] See J.W.B.Bos, "Exposure at default validation", in *ibid.*
[37] Contingent liabilities may amount to substantial proportions of assets on banks' balance sheets. Data from the annual reports of banks in 15 Asian countries in 1996 show that they amounted to 53-116 per cent for Indonesia, Malaysia, Pakistan and Taiwan Province of China, to 25-46 per cent for Bangladesh, China, Hong Kong (China), India, Nepal, Republic of Korea, Singapore, Sri Lanka and Thailand, and less than 10 per cent only for Viet Nam and Macau. See P.F. Delhaise, *Asia in Crisis: the Implosion of the Banking and Finance Systems* (Singapore, etc.: John Wiley, 1998), pp. 68-72.
[38] See FSI, *op. cit.* at note 2, p. 6.

assets in December 2009 for the regions in section C.2 are as follows.[39]

- *Non-BCBS Europe*: 32 per cent are expected to be covered by Basel II and belong to foreign (foreign-controlled or foreign-incorporated) banks.

- *Africa*: 11 per cent are expected to be covered by Basel II and belong to foreign banks; the figures changes to 12 per cent if the country with the greatest banking assets (presumably South Africa – see Box 3 above) is excluded.

- *Asia*: 21 per cent are expected to be covered by Basel II and belong to foreign banks; the figure rises to 35 per cent if the country with the greatest banking assets (presumably China – see Box 3) is excluded.

- *Caribbean*: 24 per cent are expected to be covered by Basel II and belong to foreign banks; the figure rises to 92 per cent if the country with the greatest banking assets (presumably Cayman Islands – see Box 3) is excluded.

- *Latin America*: 29 per cent are expected to be covered by Basel II and belong to foreign banks; the figure rises to 43 per cent if the country with the greatest banking assets (presumably Brazil – see Box 3) is excluded.

- *Middle East*: 26 per cent are expected to be covered by Basel II and belong to foreign banks; the figure rises to 36 per cent if the country with the greatest banking assets (presumably Saudi Arabia – see Box 3) is excluded.

The FSI's emphasis on "the role of foreign players" in the implementation of Basel II in the Caribbean should apply only to countries, other than the Cayman Islands, which are apparently not currently expecting to implement Basel II but whose banking sector consists overwhelmingly of foreign institutions.[40] Elsewhere the term, "major drivers", can be interpreted in different ways. It may refer to disproportionate representation of foreign banks among those expected to implement Basel II or to competitive emulation among domestic banks in response to the adoption by foreign banks of Basel II or to both. If comparable figures by region were available for the proportion of total banking assets belonging to foreign banks, the validity of the first of these possible characterizations could be scrutinized more closely (subject to the qualification that this proportion is susceptible to change between now or the recent past and 2009).[41] But unfortunately this is possible – and even so highly approximately – only for Asia and Latin America.

If the shares of banking assets under foreign control in the groups of countries for which data are given in Box 4 are

[39] In the absence of a generally accepted definition for foreign-controlled banks the FSI questionnaire left it to supervisory authorities to provide information according to their own rules and definitions with the result that the figures in the text do not have a uniform basis. See *ibid.*

[40] There are over 600 banks and trust companies registered in the Cayman Islands. For relevant features of the territory's legal and tax regime see B. Spitz, *International Tax Havens Guide: Offshore Tax Strategies* (New York: Panel Publishers, 2001), chapter 34.

[41] Cross-border mergers and acquisitions have on occasion substantially changed the shares of total banking assets subject to foreign control during short periods. For example, 19 per cent of total banking assets in Mexico were subject to foreign control in December 1999 according to an IMF study (*International Capital Markets: Developments, Prospects, and Key Policy Issues*, World Economic and Financial Surveys (Washington, D.C.: IMF, September 2000), pp. 153-156); however, by 2002 this figure had increased to more than 80 per cent, four of the countries' five largest banks now being under foreign ownership.

representative of the overall position in the Asian and Latin American respondents to the FSI questionnaire, the first of the two characterizations – the disproportionate representation of foreign banks among those expected to implement Basel II – does not receive strong support from a comparison of the percentages above for the percentages of banking assets expected to be covered by Basel II with the estimates of the share of such assets under foreign control in either the group of Asian countries (14 per cent or 27 per cent ex-China) or of Latin American countries (47 per cent). This suggests that in these two regions the role of foreign banks in driving implementation of Basel II is associated rather with the competitive pressures on domestic banks expected to be generated by their adoption of the new rules for regulation.

Box 4. The scale of the presence of foreign banks in Asian and Latin American developing countries

Data are available in a recent study of the Committee on the Global Financial System on the percentage of total banking assets attributable to foreign banks (foreign control being defined as ownership of at least 50 per cent of outstanding equity) for the groups of countries in Asia and Latin America shown below.[42] These percentages can then be weighted by the shares of institutions in the different countries in the total banking assets of banks from countries in the two groups given in the regional surveys in *The Banker* cited in Box 3. These calculations lead to an estimate of 14 per cent for foreign ownership of banking assets in the Asian group including China, a figure which rises to 27 per cent, if China is excluded, and an estimate of 47 per cent for such ownership in the Latin American group.

Share of the assets of banking systems under foreign control in selected Asian and Latin American countries in 2002[43] (per cent)

Asia		Asia (cont'd)		Latin America	
China	2	Philippines	18	Argentina	48
Hong Kong (China)	72	Singapore	76	Brazil	27
Indonesia	13	Thailand	18	Chile	42
India	8			Mexico	82
Rep. of Korea	8			Peru	46
Malaysia	18			Venezuela	34

[42] Committee on the Global Financial System, *Foreign Direct Investment in the Financial Sector of Emerging Market Economies*, Report submitted by a Working Group established by the Committee on the Global Financial System (Basel: BIS, March 2004), pp. 7-10.

[43] The figures refer to 1999 in the case of China.

Expected changes in capital requirements

The third major consideration affecting banks' choice of approaches under Basel II (in addition to resource costs and capacity to fulfil conditions of eligibility) will be the incentives associated with the resulting change in capital requirements (and thus in costs) overall and by exposure class. The fullest analysis so far undertaken of the likely effects of Basel II is the third Quantitative Impact Study (QIS3)[44] undertaken under the supervision of the BCBS in October 2002, but incorporating the rules in the April 2003 version of the proposals, *The New Basel Capital Accord* (CP3).[45] The study involved 188 banks from G10 countries and 177 from other countries and territories, including 24 outside the G10 and the EU (classified as other countries), the great majority of which would be classified as emerging market or developing countries.[46] Further analysis of the QIS3 data for the EU-15 countries has been published in a study of PricewaterhouseCoopers (PwC) carried out for the European Commission while revising the rules for the capital of EU financial institutions.[47] Although its country coverage is more limited than that of the QIS3 document and does not include any emerging-market or developing economy, this study is of special interest owing to its greater detail on the changes due to Basel II at the level of exposure class, country and type of financial institution.

Banks taking part in QIS3 were split into Groups 1 and 2: the first consists of large, diversified and internationally active banks; and the second of smaller, frequently more specialized entities. Banks were invited to carry out the exercise for all three major approaches to setting capital charges for credit risk and for the Standardised approach to operational risk (see Box 1). The size of the reporting samples decreased with the degree of sophistication of the approach. For example, less than 25 per cent of banks from outside the G10 and the EU, which completed estimates for the Standardized approach also completed those for the foundation version of the IRB approach, and only a subset of those banks, which completed estimates for the foundation version of the IRB approach also did so for the advanced version as well. Indeed, so small was the number of Group 2 banks from G10 and EU countries and of banks belonging to Groups 1 and 2 from other countries, which completed returns for the advanced version of the IRB approach that the results were not included in the published QIS3 results.

Major features of these results include:

- Capital requirements increased for Group 1 and Group 2 banks in all three country groupings for banks using the Standardised approach. However, for G10 and EU banks the increases were due to the new capital charge for operational risk. *For banks in other countries most of the rise in capital requirements was also due to the charge for operational risk.*

- Capital requirements decreased for Group 2 banks in the G10 and for Group 1 and Group 2 banks in the EU using the foundation version of the IRB approach. Small rises were recorded for Group 1 banks in the G10

[44] See BCBS, *Quantitative Impact Study 3 – Overview of Global Results* (BIS, 5 May 2003).

[45] See BCBS, *The New Basel Capital Accord* (BIS, April 2003).

[46] The countries and territories in this grouping are Australia, Brazil, Bulgaria, Czech Republic, Chile, China, Hong Kong (China), Hungary, India, Indonesia, Republic of Korea, Malaysia, Malta, Norway, Philippines, Poland, Russia, Saudi Arabia, Singapore, Slovakia, South Africa, Tanzania, Thailand and Turkey.

[47] See PwC, *Study on the financial and macroeconomic consequences of the draft proposed new capital requirements for banks and investment firms in the EU*, Final ReportMARKT/2003/02/F, April 2004.

and for banks in other countries, *those in the latter resulting from the combination of a fall in the charge (3 per cent) for credit risk offset by a rise in that for operational risk (7 per cent)*. The capital requirements decreased for Group 1 banks in both the G10 and the EU using the advanced version of the IRB approach, but no results are reported for Group 2 banks or other countries.

- For both Groups and all the country groupings there were decreases in the capital requirements for retail exposures for banks using the Standardised and both versions of the IRB approach. Similarly, there were decreases in the capital requirements for exposures to SMEs except for banks in other countries using the foundation version of the IRB approach for which there was a marginal increase of 1 per cent.

More fleshed-out, but similar results, are available for EU-15 countries in the PwC study based on the same data.

- For the nine countries for which data are reported increases in capital requirements were expected in only two and decreases in the other seven.

- A marginal increase in capital requirements (1.9 per cent) was expected for banks using the Standardised approach, and decreases for banks using the foundation and advanced versions of the IRB approach (6.9 and 8.7 per cent respectively).

- Substantial decreases in capital requirements were recorded for both retail and SME exposures. In the case of retail exposures the decreases were 8.3 per cent for banks using the Standardised approach, 12.2 per cent for those using the foundation version of the IRB approach and 10.9 for those using the advanced version of the IRB approach. The figures include SME exposures treated as retail because their size was below a specified ceiling (see Box 5). In the case of exposures to SMEs treated as corporates the decreases were 2.1 per cent for banks using the Standardised approach, 3.5 per cent for those using the foundation version of the IRB approach and 6 per cent for those using the advanced version of the IRB approach. For the EU banks covered by the PwC study retail exposures (other than those to SMEs) accounted for 24.5 per cent of banks' total assets, and exposures to SMEs for 15.5 per cent (9.6 for SME exposures classified as corporates and 6 per cent for those classified as retail), *and one of the study's conclusions is that financial institutions specializing in these categories of lending such as retail banks and building societies can be expected to receive especially large benefits in terms of reduced capital requirements from the new rules*.[48]

While these figures apply to the EU, they also point to the possibility of significant incentives elsewhere for the adoption of the more advanced approaches to credit risk under Basel II. As in the overall data for QIS3, under the Standardised approach reductions in the capital charge for credit risk are rather more than offset by the new charge for operational risk, but under the IRB approach there are significant reductions in overall capital charges. The response in a particular country to these incentives will depend on the actions and capacity of various institutions and groups, and on the willingness of regulators to permit use of the more advanced approaches which is likely to reflect their capacity to carry out the required supervision.

[48] See *ibid.*, p.57.

Box 5. Risk weights for retail and SME exposures in Basel II

Owing to the high level of risk diversification possible for loans, which are small in relation to the size of a bank's portfolio low weights for credit risk under Basel II are attributed to retail exposures, including those involving residential mortgages, and to exposures to SMEs.

Under the Standardised approach, to be included in the regulatory category of retail portfolio a claim must meet a series of conditions: (a) an *orientation criterion* which specifies that it must become from an individual person or persons or on a small business; (b) a *product criterion* which specifies eligible categories of loans and overdraft facilities (and which excludes securities such as bonds and equities); (c) a *granularity criterion* which requires satisfying the bank's supervisor that the regulatory retail portfolio is sufficiently diversified; and (d) a value threshold of 1 million Euros for the exposure to counterparties. Claims meeting these conditions qualify for a risk weight of 75 per cent. Claims secured by mortgages on residential property occupied by the borrower or rented qualify for a risk weight of 35 per cent.

Under the IRB approach three different categories of retail exposure are distinguished: residential mortgage loans; qualifying revolving retail exposures (QRREs) (revolving, unsecured exposures to individuals with a value up to 100,000 Euros, which would include much credit-card business); and other retail exposures (which include loans to individuals and to SMEs up to a ceiling of 1 million Euros). The different formulae used to calculate risk-weighted assets for each of three categories apply to pools of exposures, not to individual loans. These formulae are adjusted downwards by means of their correlation terms to reflect greater risk diversification than for corporate, sovereign and bank exposures, and the resulting risk weights are below 100 per cent for PD below threshold values which vary with the category of retail exposure.

Under the IRB approach for claims on SMEs, which do not qualify as retail exposures but where the sales of the borrower are below a threshold of 50 million Euros, there is an alternative downward adjustment to the correlation term. To illustrate the impact of this adjustment on the risk weights of SMEs the RF provides a numerical simulation for a claim with a maturity of 2.5 years on a firm with a turnover of 5 million Euros for different levels of PD, which shows a reduction of the risk weight by 20-25 per cent for PD, in the range of 0.03 per cent to 20 per cent.[49]

A not necessarily exhaustive list of these institutions and groups would include: (a) large domestic banks (often partly or wholly state-owned), which will generally be involved in retail lending and lending to SMEs on a substantial scale, but which may not be well placed to adopt either version of the IRB approach owing to factors such as sheer size and relatively backward systems of information technology; (b) other banks offering a wide range of services (including foreign banks or banks with a substantial foreign equity interest), which have identified the potential competitive benefits of adopting the IRB approach for retail and SME lending and believe that they are capable of fulfilling the conditions for eligibility regarding technology, data and internal controls; (c) smaller and more specialized financial institutions involved in retail and SME lending, some of which may be potential candidates for the adoption of the IRB approach, but others of which are not owing to inability to fulfil the eligibility conditions; and (d) people with banking skills, sometimes acquired abroad, who may be prepared to purchase or

[49] See RF, Annex 3.

establish financial institutions to take advantage of the benefits of the IRB approach. In developing countries there will be considerable variation in the weight which should be attributed to these different institutions and groups. Nevertheless, the figures for the expected coverage of banking assets by the foundation version of the IRB approach in section C.2 suggest the substantial scale of those who have identified its commercial advantages in countries where supervisors are willing to accommodate its use.

Alternative models of banking practice

Basel II incorporates underlying assumptions about the nature of the relationship between a bank and its counterparties which, although increasingly accepted as the model to be followed, are not universally applied. In Basel II this relationship is managed at arms-length, and decisions about lending and the provision of other banking services are based on reasoned analysis of the counterparty's capacity to meet interest obligations and of other dimensions of creditworthiness. Where banking practices follow a different model, implementation of Basel II is likely to be slowed to allow for the required changes in such practices to be adopted or to provide time for regulatory reconciliation of the Basel II model with alternative principles. Ongoing examples of the latter are the initiatives under way to reconcile Islamic banking, which does not permit interest and is based on different principles regarding the sharing of risk between the sources and users of bank finance, and prudential rules including regulatory capital requirements incorporating the logic of the Basel capital rules.[50]

Of quantitatively greater importance, and possibly a source of greater controversy, as to the universal appropriateness of the Basel II model are lending practices, which go by names as policy or directed lending, relationship or name lending and collateral-based lending. In such lending loans are made on the basis of analysis incorporating different criteria from those of the credit analysis of the Basel II model or on the basis of rules in which credit analysis plays little or no role, and the assumptions about risk sharing between a bank and its borrowers involve a relationship that is less arms-length and in some cases is more like an equity investment.

Although there is overlapping in practice between these different lending categories, an attempt at classifying some of their characteristics may be helpful.[51]

- *Policy lending* is lending in furtherance of government purposes, such as agricultural or industrial development, in accordance with criteria which are not exclusively commercial. It is typically associated with an explicit or implicit promise that the government's financial support will be forthcoming to meet certain losses, a promise that conflicts with the rationale of prudential capital which is intended to serve as the bank's own, independent cushion for losses. Policy lending overlaps with *directed lending*, the principal distinction being that in the latter the official directives leave less room for discretion. Both types of lending are frequently carried out through institutions that are partly or wholly state-owned.

[50] For more information on these initiatives see, for example, A. Cornford, "The banking capital of Basel II in non-standard contexts", available at the web site of the Financial Markets Center, http://www.fmcenter.org

[51] This classification follows closely that of J. Golin, *The Bank Credit Analysis Handbook: A Guide for Analysts, Bankers and Investors* (Singapore: John Wiley & Sons (Asia), 2001), pp. 185-199 and Appendix D.

- *Name or relationship lending* is lending, which may be based on a close understanding of a borrower's business, but in which a major or preponderant role is also played by the borrower's economic standing or the personal relationship between the borrower and senior bank officials.

- *Collateral-based lending,* which sometimes goes by the less complimentary name of *pawnshop lending*, is lending where the lender gives priority to the collateral furnished by a borrower over analysis of creditworthiness.

These types of lending have been pervasive in Asian countries which have achieved exceptionally high rates of economic growth in the recent historical period. Assessment of their role is difficult because their good and bad effects cannot be abstracted from their historical context and different country environments. At one extreme is the Japanese banking system as it functioned between the end of World War 2 and the 1980s. This system involved policy and directed lending, as well as emphasis on the importance of long-term relationships between lenders and borrowers and confidence in the willingness of the different actors in the system to provide mutual support when needed. Administrative guidance as to sectors of national importance played a large role in the direction of lending, and close relationships between the constituent business entities (including banks) of business combines (*keiretsu*) were the norm. The system is widely regarded as having been a positive force in the country's development until banks decisions began to be distorted by the dramatic effects on asset values of the property and stock-market booms of the 1980s. The success of the system undoubtedly had an influence on Japan's neighbours, particularly because of the compatibility of many of its features with pre-existing local banking practices.

Elsewhere lending practices deviating from the model underlying Basel II have had more mixed results than those of pre-1980s Japan. Relationship lending easily shaded into *connected or related-party lending*, lending to borrowers associated with a bank's shareholders and into other forms of cronyism. Moreover, lending practices which attributed little importance to ownside financial risks left banking sectors vulnerable to the shocks associated with the financial crisis of 1997. But some more beneficial effects of these practices were also present, and in their more benign manifestations they will not easily be replaced as financial motors for economic development.[52]

Serious thinking has hardly begun on how to accommodate the potentially beneficial features of alternative models of development financing within the framework of prudential rules appropriate to the banking model of Basel II. However, there is arguably a more immediate problem related to plans for implementation. While some of the more harmful Asian banking practices are now in retreat as a result of reforms undertaken in response to financial crisis of 1997, banking models and their associated behavioural and technical norms will require considerable time for more comprehensive change. Attempts to impose such change too quickly could lead to declines in lending, whose consequences might transcend particular actors or sectors and have adverse macroeconomic effects. Thus, slow implementation of Basel II owing to required shifts in banking practice may often actually be desirable, as well as unavoidable.

[52] A veteran observer of Asian banking sums up the strengths and weaknesses of what he calls "the business/bank/politicians triangle" as follows: "Is collusion a bad thing? It is conceptually undignified. It leads to excesses... But at the same time, when collusion remains within decent bounds, the system hastens development and on the whole economies prosper... In those matters, the difficulty is for governments to maintain a decent balance between good and evil." See Delhaise, *op. cit.* at note 37, p. 25.

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