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## Financial services trade, capital flows, and financial stability

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**World Trade Organization**  
Economic Research and Analysis Division

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<b>Financial Services Trade, Capital Flows, and Financial Stability</b>
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## **Financial Services Trade, Capital Flows, and Financial Stability**

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### **Abstract**

This study argues that trade policies regarding financial services are an important—but often neglected—determinant of capital flows and financial sector stability. Financial services trade liberalisation which promotes the use of a broad spectrum of financial instruments and allows the presence of foreign financial institutions whilst not unduly restricting their business practices, results in less distorted and less volatile capital flows, and promotes financial sector stability. The study finds significant evidence in favour of this claim through an empirical analysis of GATS commitments in 27 emerging markets. For example, countries which experienced financial crisis during 1991-97 show a combined indicator of financial services trade restrictiveness three times as high (= less favourable for financial stability) as countries without a crisis.

The study's findings have two important policy implications. Firstly, liberalising international trade in financial services can be a market-based means to improve the "quality" of capital flows and to strengthen financial systems. This would complement other policies, including financial regulation. Secondly, even in countries where the financial system is weak, and where immediate, full-fledged financial sector liberalisation is not advisable, certain types of financial services trade could be liberalised, as such trade strengthens the financial system without provoking destabilising capital flows.

JEL codes: F13, F30, G20

Keywords: Financial services, international trade, capital flows, financial stability, WTO

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## **I. Introduction**

The debate on the role of open financial markets has become increasingly controversial since the onset of the Asian crisis in summer 1997. However, this debate suffers from two shortcomings. First, it does not always distinguish between capital flows and the financial services transactions through which capital is transferred between countries. Hence, there is not enough awareness that we can have, in principal, liberalisation of financial services trade without the same degree of liberalisation of international capital movements. Second, many observers do not recognise that different types of financial services trade can have a differing impact on the level, volatility, and structure of capital flows, and the stability of the financial system. A simple example illustrates this point: if a government does not permit any financial services trade apart from short term international bank lending and depositing, this restricts international capital flows to only such lending and depositing. Financial stability may also be affected if (as many observers have argued) such short term flows coupled with rapid shifts in investor confidence result in more volatile capital flows and raise pressure on financial systems.

This study discusses in detail the relation between financial services trade policies, capital flows and financial stability. The framework for analysing financial services trade is the General Agreement on Trade in Services (GATS), which provides the multilateral legal framework for over 95 percent of world trade in financial services. The GATS financial services agreement distinguishes between a number of sub-sectors, including lending and deposit taking, participation in securities issuance and trading etc. But there is a further dimension to financial services trade: the so-called modes of supply. Financial services are provided mainly in two ways: cross-border (mode 1) and through the presence of a foreign establishment (mode 3).<sup>1</sup> The GATS encourages progressive liberalisation and allows differential liberalisation commitments across different financial services and modes of supply.

The study hypothesises that financial services trade can help mitigate financial market and policy imperfections which adversely affect the level, structure and volatility of capital flows, and undermine financial stability. But the key point here is that certain types of liberalisation are more conducive to financial stability than others. Liberalisation which: (i) promotes trade in a broad array of financial

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<sup>1</sup> Arranging a loan with a foreign bank abroad via telephone would fall under mode 1 whereas the same

instruments; (ii) allows the commercial presence or local establishment of foreign financial institutions (mode 3 trade); and (iii) does not unduly restrict the business operations of such local establishments strengthens institutional capacity (such as transparency, regulation and supervision, etc.) and improves financial sector efficiency. Liberalisation of this nature is also likely to promote less distorted and less volatile capital flows, both directly through the types of financial flows it encourages and indirectly through its effect on institutional capacity. Stronger institutions, greater efficiency and more manageable capital flows, in turn, are likely to increase financial sector stability. Empirical evidence for 27 developing countries and transition economies supports these claims.

The study's findings have some important policy implications. Firstly, liberalising international trade in financial services can be a market-based means to improve the "quality" of capital flows and to strengthen financial systems. This would complement other policies, including financial regulation. Secondly, a country which, for various reasons, is reluctant to liberalise all financial services trade and capital flows immediately, should still consider the liberalisation of those types of trade which promote stability and efficiency in the financial system. However, such partial liberalisation should only "buy" the time needed to establish the proper policy environment for broader liberalisation later.

After an introduction to the literature and the current debate (Section II), a detailed discussion of the study's hypotheses follows (Section III). Section IV develops indicators of financial sector openness which incorporate qualitative differences and biases in commitments made under the GATS agreement. A first empirical assessment of the hypotheses for 27 developing countries and transition economies follows (Section V). Section VI concludes and discusses some tentative policy implications in more detail.

## **II. The Limited Role of Financial Services Trade in the Ongoing Debate on Capital Flows and Financial Sector Stability**

There are two strands of literature which are important in this context: the first discusses the benefits from financial services trade and another considers the determinants of financial sector stability. Neither body of literature focuses clearly on the links and distinctions between financial services trade,

(..continued)

loan arranged through the domestic subsidiary or branch of a foreign bank would fall under mode 3.

capital flows and financial sector stability.

**Capital flows, financial services and obligations under the GATS.** Before reviewing some of the existing literature, it is worthwhile clarifying the distinction between capital flows and the financial services through which capital is transferred. Observers often fail to recognise that financial services liberalisation does not necessarily imply capital account liberalisation, with the consequence that liberalisation in financial services trade may be held back for fear of its implications for the capital account.

The following example illustrates this point. A lending service can be provided by domestic or foreign financial institutions. If a domestic bank provides a loan to a domestic client using domestic capital (Cell I below), this creates neither financial services trade nor an international capital flow. If a domestic bank lends capital from abroad to the same client (Cell III), this is a case of capital flows without financial services trade. A loan arranged by a foreign institution involving only domestic capital (Cell II) is an incidence of financial services trade without international capital flows. Only transactions in Cell IV, such as loans through a foreign bank involving international capital, represent international capital flows and trade in financial services.

**Matrix 1 on Domestic versus International Capital Flows and Financial Service Provision: the Example of Lending by a Foreign Supplier Abroad**

	<b>Loan provided by domestic supplier</b>	<b>Loan provided by foreign supplier abroad</b>
<b>Loan involves domestic capital only</b>	I. Neither financial services trade nor international capital flow	II. Financial services trade only
<b>Loan involves international capital only</b>	III. International capital flow only	IV. Financial services trade and international capital flow

If we consider this matrix from a trade policy perspective, it implies that completely closed financial systems (both in terms of services and capital flows) only generate transactions in Cell I. Liberalisation of capital flows would extend the scope of possible transactions to Cell III. Liberalisation of financial services trade without permitting international capital movements would open up transactions classified under Cell II (including those never involving capital movements, such

as the provision of financial information).<sup>2</sup> Liberalisation of both services and capital flows would open the full opportunity set including Cell IV.

In the matrix above, the foreign supplier is a bank established abroad. If the foreign supplier provides the service through a commercial presence (branch, subsidiary, agency etc.) in the territory of the country, then inward foreign direct investment to "set up shop" would become necessary, as indicated in Matrix 2.

**Matrix 2 on Domestic versus International Capital Flows and Financial Services Supply: the Example of Lending by a Foreign Supplier Established in the Country**

	<b>Loan provided by domestic supplier</b>	<b>Loan provided by foreign supplier established in the country</b>
<b>Loan involves domestic capital only</b>	Ia. Neither financial services trade nor international capital flow	IIa. Financial services trade plus inward direct investment
<b>Loan involves international capital only</b>	IIIa. International capital flow only	IVa. Financial services trade plus inward direct investment and international capital flow related to the supply of the loan

In this latter case, liberalisation of inward direct investment in the banking sector would be required to achieve liberalisation of financial services trade through commercial presence.<sup>3</sup> In fact, developing countries have often chosen to liberalise inward direct investment (and certain related capital flows)<sup>4</sup> through their commitments in mode 3 (commercial presence) while restricting cross-border capital movement by relatively limited commitments in mode 1 (cross-border supply).

The General Agreement of Trade in Services (GATS) requires only limited liberalisation of capital movements in the context of financial services trade liberalisation. Commitments to cross-border trade liberalisation (mode 1) require the liberalisation of capital inflows and outflows which are an

<sup>2</sup> Financial services which typically give rise to current transfers and payments without necessarily involving cross-border capital movement are services such as insurance intermediation, stock brokerage, provision and transfer of financial information and advisory services. If foreign institutions are chosen for their advance technology or expertise, trade liberalisation can be quite valuable regardless of whether capital movement is allowed.

<sup>3</sup> It is also recognized, however, that restrictions on capital outflows, such as the repatriation of a portion of the invested capital, would discourage inward direct investment. The discussion here only refers to liberalization required by the commitments made by Members under the GATS.

<sup>4</sup> The extent to which transfers of capital related to the commercial presence need to be liberalized under a commitment in mode 3 is not defined in the GATS (Article XVI footnote 8). See the description below of the relevant GATS provisions.

"essential part of the (liberalised) service". Regarding commercial presence, the GATS rules require the liberalisation of capital inflows which are "related to the supply of the service" without specifying in more detail whether this refers only to capital and equipment to "set up shop" or whether this also includes capital inflows related to service provision.<sup>5</sup> Capital outflows related to the supply of services by foreign establishments do not have to be liberalised under GATS.<sup>6</sup>

The above implies that even fully free trade in financial services under GATS does not require full capital account liberalisation. Or in terms of the aforementioned matrix, free trade means permitting all transactions within Cell II/IIa, but only part of the transactions within Cell IV/IVa. For that matter, liberalization of services trade is also consistent with the existence of certain restrictions on capital movement.

It must be recognized, however, that restrictions on capital movement (such as capital and exchange controls) substantially reduce the users' freedom to purchase services directly from foreign financial institutions and may also discourage entry. Arrangements for delivering financial services across borders without permitting capital flows will be costly. Therefore, opening the capital account, although a distinct issue from that of opening to foreign financial services competition, sooner or later becomes an issue that countries must face. Economically speaking, liberalization of services trade and capital account liberalization are closely linked; they are both elements of an efficient, market-based economy. An orderly and well-sequenced liberalization of the capital account is necessary for a developing country to truly benefit from progressive liberalization of trade in services.

**The benefits of financial services trade.** The analysis of the economic role of financial services trade has made considerable progress in recent years, and a number of studies survey the benefits from financial services trade liberalisation. The literature suggests that international openness improves the efficiency and institutional development of financial sectors through increased competition, skill and

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<sup>5</sup> See GATS Article XVI, Footnote 8. What constitutes an "essential part of the service" for mode 1 trade and an "inflow related to the supply of the service" under mode 3 trade is not further specified.

<sup>6</sup> This provision is also likely to constrain inflows: if the repayment of a loan from abroad arranged through a foreign affiliate can not be made due to controls on capital outflows, this is likely to discourage such loans, regardless of whether a generous or narrow interpretation of GATS provisions regarding inflows is applied.



technology transfer, better risk management and risk diversion across borders, transparency and information. It encourages the use of more efficient financial instruments, and raises pressure on governments to create an adequate regulatory and supervisory environment. It is also argued that more open financial services trade improves the intermediation of resources between sectors, across countries and over time, and enhances financial stability. Claessens and Glaessner, 1997, and Claessens, Demirguc-Kunt and Huizinga, 1998 provide empirical evidence, and Kono, Low, Luanga, Mattoo, Oshikawa and Schuknecht, 1997 and Harris and Pigott, 1997 survey these issues.<sup>7</sup>

The literature also discusses the role of the multilateral trading system in financial services trade (Kono et.al., 1997). The WTO financial services agreement which will come into force in 1999 is an important step towards the liberalization of financial services trade for four reasons. First, multilateral commitments tie in the degree of liberalization attained, and in many cases contain ongoing or future liberalisation programs. This makes policies more predictable for both domestic and foreign financial institutions. Second, commitments to future liberalization can provide an incentive for policy reforms in other areas, including the macroeconomy and the regulatory environment. Third, commitments are a signal of "good" policy intent and policy stability, which can help keep domestic savings in the country and attract foreign investors. This further reduces the need for other measures (such as subsidies) to promote investment and development. Fourth, the willingness to make commitments in the multilateral context can induce other countries to do likewise. Whilst significant benefits may already arise from unilateral liberalization, multilateral commitments by many countries can magnify these benefits.

**Capital flows and financial stability.** The debate on the determinants of financial sector stability has also made considerable progress. This debate focuses mainly on shortcomings in domestic macroeconomic policies, financial sector regulation and supervision, government interventions, the term-structure of foreign debt, moral hazard arising from implicit guarantees, herding behaviour by investors, and capital controls. Regarding capital flows, many observers are concerned about the level, structure and, perhaps most importantly, the volatility of such flows, and their implications for financial stability. Very

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<sup>7</sup> This literature, in turn, extends the more generic theoretical and empirical debate on the importance of financial services for economies (see Levine, 1997, for a survey on the economic role of the financial sector, and King & Levine, 1993, for the importance of skill and knowledge transfers).

large capital inflows, for example, can undermine monetary policies, and, coupled with lax regulatory policies, can stimulate reckless lending and asset bubbles. Volatile capital flows can undermine macroeconomic and exchange rate management, and worsen the liquidity or solvency problems of banks. This can exacerbate financial sector difficulties and, furthermore, provoke a balance of payment crisis. An unbalanced financing structure, relying for example mainly on short term lending, can exacerbate volatility, as short term loans can be called in easily, instead of being rolled over. Given the high costs of a financial crisis, financial stability and the management of capital flows has been of increasing concern to governments, particularly in emerging markets (See Dooley, 1995; IMF, ICM, 1998; and Eichengreen et.al., 1998 for a survey of these issues).<sup>8</sup> Consequently, some observers believe that short term capital controls could help in avoiding excessive short-term debt, speculation and volatility.<sup>9</sup> As regards those countries which have not yet liberalised capital flows, a cautious liberalisation of financial markets and capital flows is mostly favoured, especially when the appropriate regulatory and macroeconomic policy framework is not in place.<sup>10</sup>

The present literature does not pay much attention to the role of open markets in the provision of financial services. A few studies discuss the importance of openness to raise efficiency, develop markets, and attract new capital (Demirguc-Kunt and Huizinga, 1998 and Claessens and Glaessner, 1997). Claessens and Glaessner, for example, find that limited openness to foreign financial firms in a number of Asian countries has resulted in slower institutional development and more fragile financial systems. Goldstein and Turner (1996) and the 1998 IMF International Capital Market Report mentions the potential role of international participation in the banking system to spread risk more broadly and to transfer skills (Ch. III, p.76). However, apart from the Claessens and Glaessner study, there is no literature discussing the effect of financial services trade on the level, volatility and structure of capital flows, or on financial stability. Neither has the policy community focussed much on the importance of

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<sup>8</sup> See also IMF WEO, May 1998; and ADB, 1998, for the use of such arguments in explaining the Asian crisis, and Demirguc-Kunt and Detragiache (1998) for an empirical study of financial instability. The debate on capital controls contrasts quantitative restrictions/prohibitions and tariff-like protection such as reserve requirements and transaction taxes (see Schuknecht, 1998 for a trade policy perspective on capital controls).

<sup>9</sup> See, for example, the arguments by Bhagwati (in *Foreign Affairs*, May-June 1998) and Krugman in his open letter to Prime Minister Mahathir of Malaysia (*Fortune Investor*, September 1998).

<sup>10</sup> Johnston, Darbar and Echeverria (1997) have developed a blue-print for the phasing of domestic policy reform

trade policies in the debate on the international financial architecture. The discussion of crisis resolution in Thailand and Korea, and the World Bank's 1998 Global Economic Prospects emphasise the importance of foreign capital for financial restructuring. The G7 proposal of end October 1998 followed by the February 1999 communiqué, for example, mainly emphasises the significance of strengthening regulatory and supervisory regimes, and does not give prominence to the importance of international trade in financial services as a potential market-based means to affect capital flows and improve financial systems.

### **III. The Relationship Between Financial Services Trade, Capital Flows and Financial Sector Stability**

This section aims to clarify the relationship between financial services trade liberalisation, capital flows, and financial sector stability. Financial services trade can contribute to the strength or weakness of financial sectors through three main channels, i.e., capacity building, capital flows, and efficiency enhancement (see Figure 1).<sup>11</sup>

The term "capacity building" is used in a broad sense, referring to the effect of financial services trade on institutional structures such as infrastructure and market development, prudential regulation and supervision, and transparency.<sup>12</sup> Capacity building is unambiguously positive for financial sector stability and, as mentioned above, liberalisation is likely to have a positive effect on institutional capacity.

The effect of financial services trade on capital flows is more ambiguous. As stated previously, financial services trade does not necessarily require capital account liberalisation. But to the extent that it does stimulate capital flows, it can have quite beneficial effects by allocating resources more efficiently, providing much-needed capital, and spreading risk across borders. Alternatively, financial services trade liberalisation which encourages, for example, mainly short term lending abroad can trigger more volatile flows, and, in the context of a weak financial system, aggravate financial sector difficulties. The question

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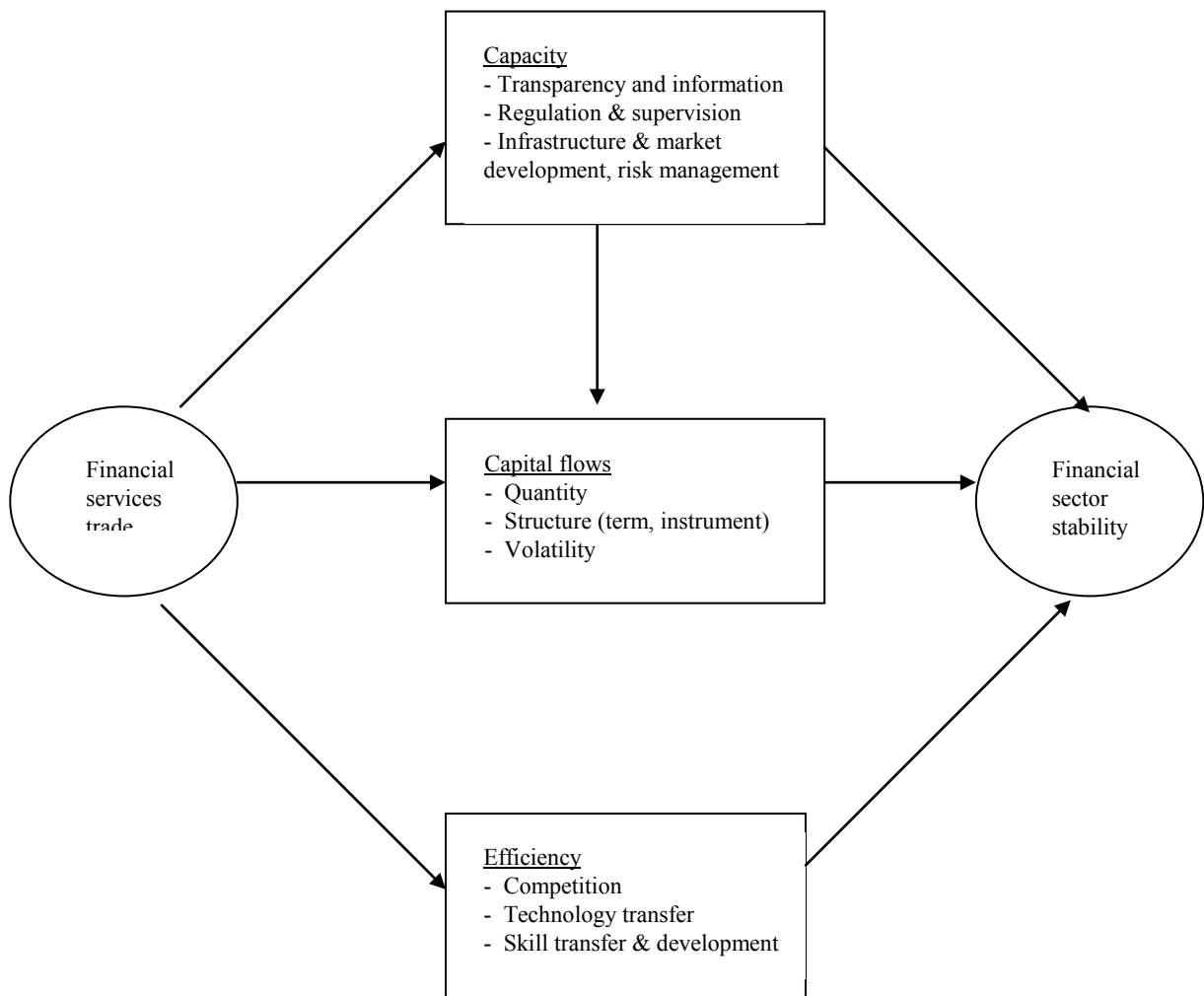
and capital account liberalisation.

<sup>11</sup> For the theoretical underpinnings of this discussion, see, e.g., Levine (1997) and King and Levine (1993). The literature on the international trade dimension is very limited (see, e.g., Francois and Schuknecht (1998).

<sup>12</sup> Infrastructure includes trading facilities, payment systems, trading personnel, and communication facilities. Market development refers mainly to the depth of markets and the financial instruments available. The Basle Core Principles for Effective Banking Supervision (BIS, 1997) discuss the key elements of effective regulation and

here, then, is which type of financial services trade encourages "high-quality" capital flows, at levels which can be absorbed by the economy, which have a balanced maturity and instrument structure and which do not display excessive volatility.

**Figure 1: The Links Between Financial Services Trade, Capital Flows and Financial Sector Stability**



With regard to the pro-competitive effect of financial services trade, liberalisation should help to enhance the stability of financial systems in the long term. Liberalisation promotes lower costs and more competitive institutions. It should be noted, however, that liberalisation which permits only larger foreign equity stakes in domestic financial institutions, and no new market entry, may simply imply the "sale" of existing rents to foreigners and not a more competitive environment (Low and Mattoo, 1997; Mattoo,

(..continued)  
supervision, and transparency.

1998). Consequently, the "fine-print" of commitments, such as that regarding restrictions on business operations by foreign establishments, is very important. Financial institutions operating in a more competitive environment are likely to be well-managed and stable. As a result, the prospect of crisis emanating from mismanagement is considerably reduced by liberalisation. In the short term, however, some domestic institutions may experience problems of adjusting to the new environment.<sup>13</sup>

In the following, this study will investigate three dimensions to financial services trade liberalisation: (i) the relative degree of liberalisation across modes of supply, (ii) the range of financial instruments for which liberalisation is considered; and (iii) the restrictiveness of mode 3 trade, as measured by restrictions on business operations by foreign establishments.

**Hypothesis 1: The liberalisation of commercial presence results in less distorted and less volatile capital flows and more stable financial sectors than cross-border trade**

**Capacity building** Commercial presence improves the institutional environment through better access to information and transparency (Table 1). Foreign service providers find it easier to gain information on the creditworthiness and the financial situation of debtors if they are physically present in the foreign market. Better information facilitates proper risk-assessment, which, in turn, reduces the danger of herding behaviour and overreactions by investors. In other words, foreign financial institutions are more likely to avoid errors and "irrational" responses as their presence gives them access to more solid information (WEO, May 1998).

Commercial presence can increase the pressure to strengthen the regulatory and supervisory framework. Foreign institutions can help to make information on best practises available. Enhanced peer pressure may induce financial institutions to observe and report on each others' situation. Reliable ratings are more likely to be developed. This makes inadequate risk management, and inappropriate interventions into banking activities less likely and the pressure to improve regulation and supervision will increase. Skill and technology transfer from abroad can further help to strengthen financial institutions and supervision (Kono et.al., 1997; Claessens and Glaessner, 1997; IMF ICM, 1998).

**Table 1: The Effects of Financial Services Commitments on Capital Flows and the Financial System, as Affected by the Mode of Supply and the Range of Instruments**

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<sup>13</sup> Perverse incentives could arise in the absence of an orderly exit policy (IMF, ICM, p.76).

	By mode of supply		By range of instruments which can be supplied	
	Mode 1	Mode 3	"Narrow" 1/	"Broad"
<u>Capacity building</u>				
Improved transparency/information	Weak	Strong	Weak	Strong
Incentive to improve regulation & supervision	Weak	Strong	Weak	Strong
Infrastructure & market development	Weak	Strong	Weak	Strong
Risk management	Weak	Strong	Weak	Strong
<u>Capital flows</u>				
More capital flows	Yes 2/	Limited 3/	-- 4/	-- 4/
Bias towards (short term) lending	Strong	Weak	Possibly strong	Weak
Increased volatility	Strong	Weak	Possibly strong	Weak
<u>Efficiency/local benefits</u>				
More competition & efficiency	Strong	Strong	Weak	Strong
Skills/technology transfer	Weak	Strong	Weak	Strong
Local employment creation	Weak	Strong	Weak	Strong

Source: GATS

1/ Commitments exclude or limit provision of important instruments/allow only lending and deposit-taking.

2/ Member governments are committed to allow the movement of capital which is an essential part of the service itself.

3/ Member Governments are committed to allow capital inflows related to commercial presence, but not outflows. Countries, of course, may choose to liberalize capital flows more generally, which, in turn, is likely to raise the level of capital flows if it occurs together with financial services trade liberalization.

4/ Depends on the instrument and mode of supply permitted, and market conditions.

Commercial presence helps market development. The development of new services and deepening of markets is easier when service providers have information about local market needs/potential (Kono et.al. 97). Foreign institutions or consortia of institutions are more likely to operate as market makers or as liquidity providers when they have a commercial presence, and a considerable base of local business. Deeper and more developed markets, in turn, are less likely to experience volatility and investors are more willing to engage in long-term commitments. The presence of foreigners can also help spread risk more broadly, resulting in better risk management and diversification, and head offices

abroad can operate as lenders of last resort (IMF, ICM 1998).

Market development through liberalisation is also helpful for monetary policy management. Liberalisation induces governments to move from direct monetary policy instruments, such as credit and interest ceilings, to more efficient indirect instruments, such as open market operations (Kono, et.al., 1997). If people only have access to bank deposits, and securities markets are under-developed, money demand can be very volatile in times of crisis. Panic withdrawals of deposits can be much more damaging to the financial system in such markets (Garcia-Herrero, 1997).

**Capital flows** As mentioned, commitments to mode 3 liberalization only require the liberalisation of capital inflows related to commercial presence whereas mode 1 requires liberalisation of both inflows and outflows. In principle, countries can therefore benefit from the institution-building effect of commercial presence with only limited commitments to capital account liberalisation.

Commercial presence also results in less of a bias towards short-term lending than cross-border trade. As previously mentioned, commercial presence facilitates the assessment of credit-worthiness and, hence, financial institutions are more willing to accept long-term commitments. This is particularly important when transparency is limited, as commercial presence can help firms generate their own information (Rojas-Suarez and Weisbrod, 1995). Commercial presence is also more likely to result in a balanced and efficient financing structure (in terms of maturity and financial instruments) as it can help the development of a full-fledged bond and equity market. An efficient financing structure and better information, in turn, reduce the volatility of capital flows (if such flows are permitted), and reduce the likelihood of excessive capital inflows. By contrast, cross-border provision will tend to be biased towards lending at the short end, with adverse effects on volatility.

**Efficiency** Competition and efficiency is likely to increase both through cross-border trade and commercial presence.<sup>14</sup> But commercial presence results in greater benefits from local employment generation and skill and technology transfer (or development). Commercial presence is also more likely to help the development of a strong domestic service sector as domestic institutions tend to learn more from

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<sup>14</sup> For a theoretical analysis see Francois & Schuknecht, 1998; for a CGE analysis see Ojeda, McCleery and DePaolis, 1997a; and for empirical studies see Demirguc-Kunt & Huizinga, 1998, Ojeda, McCleery and DePaolis, 1997b (India and China), and for what can be expected in the Euro area, see Lannoo and Gros, 1998.

the practices of foreign institutions' commercial presence than from their cross border transactions. Employees of foreign establishments may switch to domestic institutions, taking their skills with them (Kono et.al, 1997; OECD, 1997; IMF ICM 1998).

**Hypothesis 2. Liberalisation across a broad range of instruments promotes less distorted and more stable capital flows and a more stable financial system than liberalisation of lending/depositing only**

**Capacity building** Liberalisation of a broad rather than a narrow range of services can have significant capacity building effects (even though such effects are probably greater under mode 3 than mode 1, as discussed above) (see previous Table 1). If foreign service providers are allowed to supply a broad range of services, rather than only lending and deposit taking, they are likely to help develop bond and stock markets or, in other words, financial market broadening and deepening. This helps to reduce information gaps and increase transparency about the soundness and creditworthiness of companies and financial institutions (as reflected in bond ratings and stock prices). Transparency is also increased by the fact that activities in securities markets typically require more extensive disclosure than lending (IMF, WEO, May 1998, Claessens and Glaessner, 1997). Broad-based liberalization also increases pressures to improve regulation and supervision across a broad range of financial services (see above). Risk management becomes easier when certain instruments such as forward contracts and hedging of foreign exchange and interest obligations become available.

**Capital flows** Underdeveloped financial markets result in heavy reliance on direct lending, often at the short end of the term structure, and consequently short-term capital flows. Broad-based liberalisation is likely to reduce this bias, as the subsequent development of bond and equity markets allows a more balanced financing structure across instruments and maturities. This tends to reduce distortions in and the volatility of capital flows. It should also be noted that a number of financial services, such as information services or services related to bond issues do not necessarily require capital flows.

**Efficiency** Broad-based liberalisation commitments increase competition and lead to lowest cost practices in all market segments. In the absence of commitments on securities issuance and trading, for



example, fees charged may be higher than necessary, or certain instruments may simply not be available. This can introduce a bias towards more developed and liberalised sectors such as lending; it can reduce the skill and technology transfer, render risk management more difficult and distort investment decisions.

**Hypothesis 3. Restrictions on foreign establishments undermine the benefits from mode 3 liberalisation, and thereby reduce their stabilising effects**

A number of restrictions on commercial presence can undermine if not completely offset the beneficial effect of mode 3 trade on the "quality" of capital flows and financial sector stability. We distinguish four types of restrictions: equity limits, restrictions on raising domestic financing, restrictions on retail operations, and limits on new licenses (see Table 2).

**Table 2: Effects of Certain Restrictions on Business Operations by Foreign Establishments**

	Restrictive measures on: 1/			
	Equity	Domestic financing	New licenses	Retail operations
<u>Capacity building</u>				
Transparency/information	Weaker	Weaker	Weaker	Weaker
Regulation & supervision	Weaker	--	--	--
Infrastructure & market development	Weaker	Weaker	Weaker	Weaker
Risk management	Weaker	--	--	--
<u>Capital flows</u>				
More capital flows	--	Yes	--	Yes
Bias towards (short term) lending	Yes	Yes	Yes	Yes
Increased volatility	Yes	Yes	Yes	Yes
<u>Efficiency/local benefits</u>				
Competition & efficiency	Weaker	Weaker	Weaker	Weaker
Skills/technology transfer	Weaker	Weaker	Weaker	Weaker

1/ The table only shows the most obvious links, other indirect links are conceivable as well.

**Capacity building.** Low limits on equity participation in financial institutions reduce foreign service providers' incentive and ability to exercise corporate control, and, thereby, to promote financial market development, transparency and better regulation and supervision. Lower equity stakes also may

deprive the financial institution of a credible lender of last resort.

Limits on the raising of domestic financing may also limit incentives towards capacity building. If foreign establishments can not raise domestic funds for their operations, they are less likely to promote the development of domestic financial markets. They also have less information about the domestic financial markets, as can be derived from depositor or investor behaviour.

Limiting the issuance of new licenses reduces competitive pressure for market development and, as mentioned, limits the availability of information to those foreign investors who have to resort to cross border trade instead. Similar effects can be expected from limiting the operation of branch offices by foreign institutions.

**Capital flows** If a country allows the entry of foreign service providers but prohibits them from raising domestic capital, it forces financial institutions to seek international capital for their business transactions. This restriction, then, increases capital inflows, biased towards short term lending if it coincides with a lack of information on borrowers' credit-worthiness and underdeveloped financial markets (or if such flows are not allowed, the commitments are nearly worthless). If equity participation is limited to low levels, the resulting lack of corporate control and information could also result in a similarly distorted term and instrument structure of capital flows.

If foreign service providers are not allowed to open branch offices, they are required to concentrate largely on wholesale businesses. Wholesale business tends to be more volatile than retail business because corporate investors such as fund managers can move money more easily and quickly into and out of markets. Without branch offices, banks will find it difficult to build up a broad domestic depositor base, and they have to rely more heavily on foreign financing, i.e., capital inflows. Less competition arising from restrictions on branching or new licenses also means less pressure for market development and the introduction of new instruments which together with a lack of information about lenders can produce a short term lending bias.

**Efficiency.** Low equity limits imply that foreign investors may not have the necessary voting power to improve the efficiency of the institution, including management and controls. Investors may also be less willing and able to introduce the use of best technologies, modern financing techniques and

management practises. Furthermore, limitations on domestic financing, new licences, and retail operations reduce competitive pressure and efficiency in financial markets, with adverse consequences for local service prices, and indirectly also financial stability.<sup>15</sup>

#### **IV. The variables for an empirical analysis**

In the following, we will conduct an empirical analysis of the relationship between financial services trade liberalisation, capital flows and financial sector stability. In a first step towards testing the three previous hypotheses, indicators evaluating financial services trade liberalisation as embedded in the GATS commitments are developed.<sup>16</sup> This is followed by a description of dependent and other independent variables.

##### **a. Indicators of financial services trade liberalisation**

The commitments from which the following indicators are derived are those which were in the GATS Schedules. The commitments are minimum guarantees of market access or national treatment. WTO members are always free to apply more liberal regimes in practice. However, Claessens and Glaessner (1997) find that commitments and actual policy practice are very similar in 8 Asian countries, and we assume that this is the case for the other countries in our sample as well. Furthermore, GATS commitments are binding constraints for policy makers beyond which current policies cannot be reversed. The nature of commitments, therefore, may make them more valuable than current policies, especially in emerging markets with a volatile policy record. For these two reasons, we argue that GATS commitments can be used as proxies for financial services trade policy restrictions

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<sup>15</sup> On a related note, observers have sometimes blamed cultural factors for the relatively underdeveloped securities markets in developing countries. Trade restrictions and lack of incentives to adopt modern financing techniques could provide an alternative explanation for such observations.

<sup>16</sup> The policy commitments are listed in the WTO Members' Schedules of Specific Commitments made at the end of the Uruguay Round in December 1993. Those commitments entered into force under the GATS agreement on 1 January 1995. For many countries, the commitments were revised as a result of the financial services negotiations in 1995 (entry into force on 1 September 1996) and those in 1997 (entry into force on 1 March 1999). Such changes, which are overwhelmingly liberalising commitments, are not reflected in the analysis, as they have in large part entered into force too recently to affect fluctuations in capital movement appearing in the data.

Regarding the commitments of WTO Members, account has been taken of the fact that in many countries, there are "horizontal" limitations, or restrictions applying to all service sectors inscribed in the Schedules which affect capital movement.

as perceived by market participants. It should, however, be noted that the measures contained in the Schedules and the sectorial classifications required a significant amount of interpretation as the exact scope and content of the commitments are not always clear from the inscriptions in the Schedules.

First, the questions of "modal bias" (hypothesis 1) and "lending bias" (hypothesis 2) is assessed by looking at market-access commitments for five core banking and securities services. These are deposit-taking, lending and trading in foreign exchange for banking, trading in securities and underwriting for securities. Commitments in these sub-sectors are then compared across modes 1 and 3 (cross-border supply versus commercial presence) and the range of instruments for which liberalisation commitments are in place. Finally, an indicator of restrictiveness for the activities of foreign commercial presence was developed from assessing limitations on domestic funding, retail operations, foreign equity participation and new licenses.

Table 3 illustrates the findings and the indicators for 27 countries, of which 22 have already made commitments in their Schedules (see also Annex 2). The lower the scores the more "stabilising" is the trade regime for the financial system. The third column, "modal bias", shows the relative level of commitments for modes 1 and 3. It reflects the nominal difference in commitments as represented in the first two columns. Argentina, for example, has made no commitments for cross-border supply (also called "unbound" in GATS terminology) and received a zero in the column "mode 1". Its commitments to unrestricted market access in the five services earned it the score "-2" in the "mode 3" column. The combination of commitments is likely to promote balanced and stable capital flows and stable financial systems, and it is reflected in Argentina's total score of "-2" for this indicator—the lowest score possible.<sup>17</sup> Indonesia, by contrast, has virtually no restrictions on cross border trade and because of the potential destabilising effect, receives a grade of two.<sup>18</sup> Partial liberalisation of mode 3 was graded as "-1". The combined score for Indonesia, hence, amounts to a relatively high "1" which reflects Indonesia's bias towards mode 1 liberalisation.

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<sup>17</sup> This does not mean that mode 3 is "good" and mode 1 is "bad", but that "ceteris paribus" these modes give rise to different impacts on capital flows and financial stability. The later estimations will also control for the effect of sound macro- and regulatory policies through appropriate variables.

<sup>18</sup> The underlying assumption is that a bias in commitments towards cross border trade and related capital flows can be detrimental to financial stability. The indicator does not incorporate the positive effect on efficiency as

**Table 3: Assessment of Financial Services Commitments in the GATS, Selected Developing Countries**

	Level of Commitments 1/		Indicator of modal "bias" 2/	Indicator of lending bias 3/	Restrictions on practices by foreign establishments				Indicator of restrictive- ness for foreign establish- ments 4/	Combined indicator
	Mode 1	Mode 3	(1)	(2)	Domestic funding	Retail operations	Equity limits	New licenses	(3)	(1)+(2)+(3)
<b>Argentina</b>	0	-2	-2	0	No	No	No	No	0	-2.0
<b>Brazil</b>	0	-1	-1	0	Yes	Yes	Yes	Yes	4	3.0
<b>Chile</b>	0	-1	-1	0	Yes	Some	Some	Some	2.5	1.5
<b>China</b>	0	0	0	0	...	...	...	...	...	...
<b>Chinese Taipei</b>	0	0	0	0	...	...	...	...	...	...
<b>Costa Rica</b>	0	0	0	0	...	...	...	...	...	...
<b>Czech Republic</b>	0	-1	-1	0	No	Some	No	Some	1	0.0
<b>Egypt</b>	0	-1	-1	0	Yes	Yes	Some	Some	3	2.0
<b>Ghana</b>	2	-2	0	0	No	No	No	No	0	0.0
<b>Hong Kong-China</b>	0	-1	-1	0	No	Yes	Some	Some	2	1.0
<b>Hungary</b>	0	-1	-1	0	No	Some	Some	Some	1.5	0.5
<b>India</b>	0	-1	-1	0	Yes	Yes	Yes	Some	3.5	2.5
<b>Indonesia</b>	2	-1	1	2	Some	Yes	Some	Yes	3	6.0
<b>Korea</b>	0	-1	-1	4	Yes	Yes	Yes	No	3	6.0
<b>Malaysia</b>	1	-1	0	0	Some	Yes	Some	Yes	3	3.0
<b>Mauritius</b>	0	0	0	0						
<b>Mexico</b>	0	-1	-1	2	No	No	Yes	No	1	2.0
<b>Morocco</b>	0	-2	-2	2	No	No	Some	No	0.5	0.5
<b>Philippines</b>	0	-1	-1	0	Yes	Yes	Some	Some	3	2.0
<b>Poland</b>	0	-1	-1	4	No	yes	No	No	1	4.0
<b>Romania</b>	2	-2	0	4	Some	No	No	No	0.5	4.5
<b>Senegal</b>	0	0	0	0	...	...	...	...	...	...
<b>Singapore</b>	0	-1	-1	2	Yes	Yes	Some	Yes	3.5	2.5
<b>Slovak Republic</b>	0	-1	-1	0	No	Some	No	Some	1	0.0
<b>South Africa</b>	0	-2	-2	0	No	No	No	No	0	2.0
<b>Thailand</b>	0	-1	-1	2	Some	Yes	Some	Yes	3	2.0
<b>Venezuela</b>	0	-1	-1	2	Yes	Yes	Yes	Yes	4	3.0

Source: GATS schedules

1/ 0 = unbound or non-member, 1/-1 = commitments to partial liberalization, 2/-2 = commitment to full liberalization.

2/ Indicator is nominal difference between previous columns. It ranges from -2 to 2; -2 would imply full commitments under mode 3 and unbound/non-member under mode 1; 2 would imply full commitments under mode 1 and unbound/non-member under mode 3.

3/ 0 means equal commitments for lending and securities or more liberal commitments for securities; 2 and 4 mean weak/strong bias in favour of lending liberalization.

4/ Indicator ranges from 0 to 4; 0 implies no restrictions on business practices in the four categories assessed, 4 implies important restrictions in all four areas. "Yes" in previous columns is quantified as 1, "Some" as 0.5, "No" as 0.

No country earned the highest and least stability-enhancing score of "2", as none committed to fully free trade under mode 1 while making no commitments under mode 3. Countries with relatively balanced commitments across the two modes (e.g., Ghana and Malaysia) received a total score of zero.

Non-Members of the WTO and countries whose commitments only enter into force at a later stage (a

(..continued)

emanating from cross-border liberalisation.

total of five countries; China, Costa Rica, Mauritius, Senegal and Taiwan) were treated as if both modes of supply were unbound, and received a score of zero as well.

The next column assesses whether countries made commitments across a broad spectrum of financial services or whether they are biased towards lending/depositing services. The score of 4 for Korea or Poland implies that commitments for lending and depositing are much more liberal than for securities-related services in these countries. Countries whose commitments imply no bias towards either banking or securities services (including the five countries without existing commitments) or which report more liberal commitments in the securities area (e.g. Egypt) receive a score of zero for this indicator.

The next five columns represent restrictions on activities by foreign affiliates, and the corresponding overall "restrictiveness" indicator. Argentina, for example, commits to having no such restrictions. The "restrictiveness" indicator reported in the second to last column hence takes the value of zero. Brazil, on the other hand, has all four types of restrictions in place and, therefore, earned a score of "4". Hungary has weak ("some") restrictions in 3 of the 4 areas and received a score of "0.5" for each, adding up to a total "restrictiveness" indicator of "1.5".

The last column brings together the "modal bias", "instrument bias" and "restrictiveness" indicators to a "combined indicator", giving each sub-indicator an equal weight. The lowest score of "-2" for Argentina is "most stabilising" from this perspective. For countries with a low indicator we would expect less distorted and more stable capital flows and more stable financial systems. Countries with high indicators, by contrast, are anticipated to show more volatile and more distorted capital flows and a higher incidence of financial crisis. No indicators of restrictive measures and no overall indicators were developed for the five countries without existing commitments, as we do not know enough about them in this regard.

While individual country indicators are represented in Table 3, we can make a few general observations. There has been reluctance to make substantial commitments in mode1, except for a few countries. Most countries report equally liberal or more liberal commitments for mode 3 as compared to mode 1. However, there are significant differences in the degree of commitments in mode 3. For

example, most of the countries worst hit by the Asian crisis report considerable restrictions on the activities of foreign establishments. These restrictions undermines the value of their mode 3 commitments.

A large number of countries has made more liberal commitments in securities than in banking. However, this does not necessarily mean that securities markets in those countries are well developed. On the other hand, countries which have more liberal commitments in lending compared to securities were typically countries in which securities markets were relatively less developed.

#### **b. Other dependent and independent variables**

**Dependent variables** The definition of dependent variables proved to be rather difficult. Data on capital flows is relatively limited and the incidence of financial crisis is also sometimes hard to determine. We distinguish three types of capital flows as identified in the IMF International Financial Statistics: net foreign direct investment (FDI), net portfolio investment and net "other investment" (mainly but not exclusively, bank lending and depositing). As capital flows can to some extent be substitutes, we also look at aggregated of portfolio and "other investment", and all capital flows. We compiled capital flow data for the 27 sample countries indicated above for the 1991 to 1997 period.<sup>19</sup>

Table 4 distinguishes the average level, the standard deviation and the change in 1997 as compared to 1996 for the three main types of capital flows over the 1991-97 period. These variables and the aggregates mentioned before will serve as dependent variables in the regression analysis. Table 4 also reports the total average for all sample countries and the averages for some sub-groups, and we will interpret these numbers in more detail in the results section.

**Table 4: Capital Flows 1991-97, Total Sample and Selected Country Groups**

Average level of capital flows 1991-97 (percent of GDP)			Volatility of capital flows (standard deviation 1991-97)			Change in capital flows (1997 versus 1996, in % of GDP)		
Net foreign direct	Net portfolio investment	Net other investment	Net foreign direct	Net portfolio investment	Net other investment	Net foreign direct	Net portfolio investment	Net other investment

<sup>19</sup> Complete data on bank flows are only available for a more limited number of countries in this sample which does not permit proper econometric regressions. Time-series data distinguishing short term and long term flows and bank lending as a fraction of "other investment" is only available for the period after 1995.

	investment			investment			investment		
<b>Average, all sample countries</b>	1.91	1.15	0.91	1.01	1.90	3.17	0.28	0.38	-1.15
<b>Average, South East Asia 5 1/</b>	2.10	1.10	2.58	0.64	0.78	4.02	-0.28	0.42	-8.09
<b>Average, Latin America</b>	1.61	3.21	-1.15	1.17	4.19	3.87	1.05	-0.32	0.22
<b>Average, all countries with financial crisis</b>	1.98	1.69	1.26	0.97	2.10	3.84	0.22	0.14	-2.95
<b>Average, all countries with "unfavourable" commitments 2/</b>	1.98	2.17	0.53	1.07	2.80	3.69	0.67	-0.20	-2.75

Source: IFS, GATS

1/ Indonesia, Korea, Malaysia, Philipines, Thailand

2/ Combined indicator  $\geq 3$ , as displayed in Table 3.

The variables represented in the first three columns of Table 4 aim to proxy the level of the three main types of capital flows. We expect that a lower ("stability-promoting") value of the financial services trade policy indicators developed above is correlated with more FDI and portfolio investment flows, especially relative to "other investment". A higher level of FDI stands for more long-term oriented capital flows, and more portfolio investment reflects more developed financial sectors. A larger share of FDI and portfolio investment relative to other investment is expected to reflect a more balanced financing structure across financial instruments with a smaller share of lending.

The next six columns of table 4 report the volatility of capital flows. We expect that higher "modal bias", "instrument", and "restrictiveness" indicators are correlated with more volatile capital flows, both over the 7 year period as a whole (as reflected by the standard deviation), and by the change in flows in the context of the Asian crisis in 1997. We also expect a correlation between trade policy indicators and the volatility of aggregate flows, especially that of portfolio and "other investment" flows.

The incidence of financial crisis is represented by a dummy variable which takes the value of one if the country was affected by a financial crisis during 1991-97 and zero otherwise. Financial crisis are reported in Caprio and Klingebiel (1996a and 1996b) for the 1991-95 period. Those sample countries which started experiencing a crisis only in 1996 and 1997 also received a value of one for this variable (see Annex 1 for crisis and non-crisis countries). We expect that the higher (the less stability promoting) the indicators of financial service commitments, the more likely is the incidence of crisis over the



observation period. For this estimation, we also anticipate the volatility of capital flows to have significant explanatory power. Overall capital flows may be correlated with the incidence of financial crisis if they reflect large current accounts and economic boom-bust cycles.

**Independent variables** A number of independent variables in addition to the financial service trade commitment indicators has been applied to estimate the influences on capital flows and financial crisis. These variables are also used in previous studies of financial sector stability (e.g., Demirguc-Kunt and Detragiache, 1997). Macroeconomic variables include the logarithm of the average inflation rate for the 1991-97 period, the real interest rate (deposit rate minus inflation), and the exchange regime. High inflation is predicted to be positively correlated with relatively low levels and high volatility of capital flows, and a higher probability of financial crisis, as high inflation reflects macroeconomic instability. High real interest rates are expected to attract non-FDI capital inflows (returns to FDI are reflected in profits rather than in interest rates). A fixed exchange regime is anticipated to be correlated with lower capital inflows or even outflows during 1997 as the Asian crisis unravelled.

Demirguc-Kunt and Detragiache (1997) also use the ratio of M2 to reserves as an indicator of external vulnerability. The lower reserves relative to broad money, the more vulnerable are countries to sudden capital outflows causing financial sector difficulties. This variable is, hence, expected to explain the incidence of financial crisis.<sup>20</sup>

There are no direct measurements of the quality of financial sector regulation.<sup>21</sup> The "law and order" index as developed by the International Country Risk Guide (Keefer, Knack and Olson, 1995) and the political risk indicator of the Euromoney Magazine serve as proxies for the regulatory environment. We expect high scores on the regulatory quality to be correlated with more balanced and less volatile capital flows, and a lower probability of incurring a financial crisis.

Controls on capital flows are also difficult to measure. We use the World Bank WDI indicators for controls on portfolio investment entry as an approximation for capital controls. We expect that such controls have less of an effect on FDI but more on the other two types of capital flows. As the literature typically stresses that capital flows do not cause but exacerbate financial crisis, we do not expect to find a

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<sup>20</sup> Inflation, deposit rates, M2, GDP and exchange regime data are from IMF IFS.

significant coefficient of this variable for explaining the incidence of crisis.<sup>22</sup>

Finally, we included two variables estimating existing foreign commercial presence. The first measures the share of foreign-owned banks in the total number of banks, and the other the share of foreign banking assets (for a definition, see Claessens, Demirguc-Kunt and Huizinga, 1998). We expect that foreign presence may be correlated with the less volatile and distorted capital flows and a lower incidence of financial crisis.

## V. Methodology and Results

The results of descriptive statistics and regression analysis, as outlined below, largely confirm the above-made hypotheses that financial services trade policies matter for the "quality" of capital flows and the incidence of financial crisis. Macroeconomic and (to a more limited extent) regulatory variables also contribute to explaining these phenomena. Although the trade policy variables raise the explanatory power of the estimations considerably (and are therefore not marginal), in some estimations the significance of coefficients is not very strong and robust. Therefore, the results illustrate the importance of the claims developed in this paper but individual estimations and numbers should be interpreted with some caution.

**a. Methodology** The following regression analysis will apply OLS to the analysis of capital flows and a binary probit model to the estimation of financial crisis:

*Capital flows* =  $f(c, \text{macro variables, regulatory variables, capital controls \& commitment indicators})$

*Financial crisis* =  $f(\text{macro variables, regulatory and financial variables, capital controls, capital flows \& commitment indicators})$ .

## b. Results from descriptive statistics

Before analysing the results of the regression analysis, it is worthwhile discussing some descriptive statistics. Countries which experienced financial crisis during 1991-97 show a combined

(..continued)

<sup>21</sup> Claessens and Glaessner (1997) have started to develop such indicators for a number of Asian countries.

<sup>22</sup> The compilation of capital controls by the IMF is less useful in this context, as it does not distinguish qualitative differences

indicator of financial services trade policies three times as high (= less favourable for financial stability) as countries without a crisis. Crisis countries report an average score of 2.75 (range 0-6) whereas the other countries show an average of 0.9 (range -2 to 2.5).<sup>23</sup>

The previous Table 4 also provides some interesting findings. Net foreign direct investment averaged about 2 percent of GDP for all sample countries between 1991 and 1997. As mentioned above, this is similar to the sum of portfolio and "other investment". This finding shows that FDI was the main source of foreign financing during this period, although the opposite is frequently claimed. It is also noteworthy that the Asian crisis countries relied much more on "other investment", i.e. (short-term) international lending than, for example, Latin America. The last row of Table 4 shows that the level of capital flows does not depend much on the type of financial service commitments; countries with less favourable and more restrictive commitments do not show capital flows very different from the total sample.

Data on the volatility of capital flows is also very revealing. Volatility is highest for "other investment", almost twice as high as for portfolio investment and over three times as high as for FDI. This finding does not confirm the claim that investors buy and sell bonds and equities in rapid succession, and thereby cause much volatility in capital markets. Volatility of "other investment" is much higher, probably as short term lending and depositing allows rapid movements in and out of financial markets. It is also noteworthy that the volatility of "other investment" is above average in Asia and Latin America, and in countries which experienced financial crisis. Volatility of portfolio investment and "other investment" flows is also much above average for countries with high combined indicators of commitments which are less conducive to balanced and stable capital flows (last row).

The last 3 columns of Table 4 illustrate some of the events in 1997. FDI and portfolio investment was relatively stable in the total sample and in all sub-groups. The confidence crisis of 1997 largely affected "other investment", as financial institutions were not willing to roll over their loans, and possibly as capital flight set in. The South East Asian 5, for example, experienced a decline in "other investment" flows by 8 percent of GDP, while portfolio investment increased slightly and FDI was almost constant.

(..continued)

between countries' restrictions.

The table shows that the large decline in "other investment" flows in 1997 also affected other emerging markets which had experienced a financial crisis before and those which have less favourable financial services commitments. Only Latin America experienced an improvement in "other investment" flows.

**c. Results from regression analysis**

On balance, the regression analysis fares relatively well in explaining the structure and volatility of capital flows and the incidence of financial crisis, but less well in explaining absolute levels of capital flows.

**Hypothesis 1 on the importance of mode 3 commitments for balanced capital flows and financial stability** The findings for the respective variable "modal bias" confirm the relevance of this hypothesis. Table 5, column 4 illustrates that relatively liberal regulation towards commercial presence is positively correlated with the relative size of portfolio investment flows. Furthermore, more liberal commitments towards commercial presence reduce the volatility of FDI inflows (Table 6, column 1), and raise the stability of portfolio investment flows in 1997 as compared to 1996 (Table 7, column 1).

**Hypothesis 2 on the importance of commitments on a broad range of instruments** This hypothesis as reflected in the variable "lending bias" has been confirmed relatively less by the data. The "lending bias" contributes to explaining the level of FDI flows (Table 5, column 1) and the decline in "other investment" flows in 1997 (not indicated). However, it does not contribute to explaining the volatility of capital flows over the whole 1991-97 period.

**Table 5: Determinants of the Level of Capital Flows**

Regression Analysis: OLS	Dependent variables: level of capital flows (percent of GDP)			
	Foreign direct investment	Portfolio investment	Other investment	Other investment minus portfolio investment
	(1)	(2)	(3)	(4)
Independent variables: Trade policy				

(..continued)

<sup>23</sup> Fourteen of the 27 sample countries experienced financial crisis over the 1991-97 period.

"Modal bias"	(0.61) (1.64)	-0.65 (-1.36)		1.67 (2.20)**
"Lending bias"	-0.47 (-2.73)**		-0.12 (-0.27)	
<b>Macroeconomic:</b>				
Inflation average 1991-97 (log)	-0.03 (-0.12)	1.35 (4.49)***	-1.35 (-2.23)**	-1.74 (-4.18)***
Real interest rate		0.11 (2.36)**	0.027 (0.22)	
<b>Regulatory environment &amp; other:</b>				
Law and order tradition			-0.80 (-0.87)	0.08 (0.16)
Political risk	0.05 (2.45)**	0.01 (0.47)		
Capital controls	-2.52 (-2.63)**	0.93 (0.69)	-0.30 (-0.08)	
Share of foreign banks			5.38 (1.24)	
Number of observations:	25	20	19	22
Adj. R <sup>2</sup>	0.47	0.63	0.04	0.49

\*, \*\*, \*\*\* = significant at 10, 5, 1 percent level, respectively.

**Hypothesis 3 on the importance of few restrictive measures for foreign affiliates** This hypothesis as represented by the variable "restrictive measures under mode 3" performed very well in explaining the volatility of capital flows—one of the key concerns in this whole debate. All three main types of capital flows and the aggregate of portfolio and "other investment" were significantly more volatile in countries where considerable restrictions on operations, funding, equity and new licenses were present (Table 6, columns 2-4). The composite indicator for all three types of restrictions was significant in the estimation of capital outflows of "other investment", and the sum of portfolio and other investment in 1997.

Table 8 illustrates the importance of the total restrictiveness indicator in explaining financial crisis. This indicator also proved very robust over different combinations of variables. In all regressions, the explanatory power declines considerably without the respective trade policy variables (as illustrated for example in the last two lines of Table 6). This supports the claim that trade policy is not just a

marginal variable in these estimations.

**Table 6: Determinants of the Volatility of Capital Flows**

Regression Analysis: OLS	Dependent variables: volatility of capital flows (standard deviation)			
	Foreign direct investment (1)	Portfolio investment (2)	Other investment (3)	Portfolio and other investment (4)
<b>Independent variables:</b>				
<b>Trade policy</b>				
"Modal bias"	0.44 (2.35)**			
Restrictive measures, mode 3		1.27 (2.93)**	0.77 (2.51)**	1.04 (3.07)***
<b>Macroeconomic:</b>				
Inflation average 1991-97 (log)	0.16 (1.32)	0.96 (2.11)*	0.13 (0.40)	0.49 (1.37)
Real interest rate	-0.05 (-2.52)**	0.18 (2.80)**		
<b>Regulatory environment &amp; other:</b>				
Law and order tradition	0.26 (1.73)	0.71 (1.26)	0.59 (1.43)	0.87 (1.88)*
Capital controls		-10.5 (-2.62)**	-3.75 (-2.01)*	-4.56 (-2.22)**
Number of observations:	21	17	22	21
Adj. R <sup>2</sup>	0.30	0.63	0.23	0.37
Adj. R <sup>2</sup> without trade policy variable	0.11	0.41	0.08	0.08

\*, \*\*, \*\*\* = significant at 10, 5, 1 percent level, respectively.

**Table 7: Determinants of Changes in Capital Flows 1996-1997**

Regression Analysis: OLS	Dependent variables - Change in capital flows between 1996 and 1997 (percent of GDP)		
	Portfolio Investment (1)	Other Investment (2)	Portfolio and Other Investment (3)
<b>Independent variables:</b>			
<b>Trade policy</b>			
"Modal bias"	-1.21 (-2.82)**		
Total restrictiveness		-1.41 (-2.07)*	-1.39 (-2.18)**
<b>Macroeconomic:</b>			
Inflation average 1996-97	-0.01 (-0.40)		
Exchange regime	-1.26 (-1.28)	-16.9 (-3.75)***	-15.1 (-3.51)***
<b>Regulatory environment &amp; other:</b>			
Political risk	0.06 (2.62)**	-0.05 (0.62)	
Capital controls			
Share of foreign bank assets		16.10 (2.43)**	9.92 (1.44)
<b>Number of observations:</b>	22	21	20
Adj. R <sup>2</sup>	0.40	0.20	0.33

\*, \*\*, \*\*\* = significant at 10, 5, 1 percent level, respectively.

**Macroeconomic, regulatory and other variables** Inflation was a very good predictor of portfolio and "other investment" flows whereas it does not seem to affect much FDI flows and the volatility of capital flows. Somewhat surprisingly, inflation and all other macro variables were not correlated with the incidence of financial crisis.

Portfolio investment flows are correlated with high real interest rates, but "other investment" flows and FDI are not affected. Real interest rates are also significant in explaining the volatility of FDI (negative correlation) and portfolio investment (positive correlation). This means that the higher the real interest rates the more stable FDI flows but the less stable portfolio investment flows. Real interest rates do not explain changes in capital flows in 1997 and financial crises.<sup>24</sup>

<sup>24</sup> The latter variable was a good predictor of financial crisis in Demirguc-Kunt and Detragiache (1997).

**Table 8: Determinants of Financial Crisis, 1991-1997**

<b>Regression Analysis:</b> <b>Binary probit</b>	<b>Dependent variables - Incidence of Financial Crisis</b>			
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>Independent variables:</b>				
<b>Trade policy</b>				
Total restrictiveness	0.44 (1.94)*	0.53 (2.02)**	0.71 (1.96)**	0.50 (2.05)**
<b>Macroeconomic:</b>				
Inflation average 1996-97		0.12 (0.40)	0.53 (0.92)	
<b>Regulatory environment &amp; other:</b>				
Law and order tradition				-0.24 (-1.67)*
Political risk	-0.04 (-1.87)*	-0.04 (-1.88)*	-0.05 (-1.35)	
Reserves (M2/international reserves)	0.03 (0.30)			
<b>Capital flows:</b>				
Standard deviation (other investment)	0.43 (1.69)*			
Standard deviation (portfolio and other investment)		0.45 (1.90)*		
Average flows, % of GDP (portfolio and other investment)			0.67 (1.78)*	
Average flows, % of GDP (all foreign financing)				0.20 (1.96)**
<b>Number of observations:</b>	22	21	21	21

\*, \*\*, \*\*\* = significant at 10, 5, 1 percent level, respectively.

The exchange regime has only proven to be a good predictor of changes in "other investment" flows between 1996 and 1997. (The significance of the coefficient for the variable reflecting the sum of "other" portfolio investment also seems to be mainly due to "other investment" shifts). "Other investments" were negatively affected by fixed exchange regimes, probably as the exchange rate peg in some Asian country collapsed and confidence in the peg in other countries declined as well.

As mentioned above, there is no direct measure of the quality of the regulatory environment. Both the law and order and the political risk indicator were significant predictors of capital flows and



financial crisis in a number of estimations. However, more work seems to be needed to develop useful proxies for countries' regulatory environment, and Claessens and Glaessner (1997) have started this work with a number of Asian countries.

Regarding the level or structure of capital flows, capital controls only have a significant adverse effect on FDI.<sup>25</sup> While they do seem to lead to less volatile portfolio and other investment flows in the estimations for the whole 1991-97 period, they do not contribute to explaining changes in capital flows in 1997 nor the incidence of financial crisis.

The vulnerability to external shocks as expressed by the ratio of broad money to reserves (as successfully used by Demirguc-Kunt and Detragiache, 1997) was not significant in explaining the incidence of financial crisis.

As predicted, selected capital flow variables seem a good predictor of financial crisis. The volatility of "other investment" and the aggregate of "other" and portfolio investment, and the level of "other investment" and all foreign financing had the predicted effect on the incidence of financial crisis. This illustrates the importance of large and volatile short term flows (as imbedded in "other investment"). The significance of the total level of foreign financing (which is strongly correlated with current account deficits) suggests a correlation between large current account deficits over an extended period of time (here 7 years) and financial crisis.

Finally, the two variables representing actual foreign presence were mostly not significant in explaining capital flows and financial crisis. Only the share of foreign banking assets was positively correlated with other investment flows in 1997 as compared to 1996. This finding confirms our prediction that in countries with more foreign presence, "herding behaviour" of investors and, therefore, capital outflows of "other investments" are less significant.

Somewhat surprisingly, actual foreign presence did not contribute to explaining financial crisis. Furthermore, trade openness variables do not significantly explain foreign presence. These findings suggest that foreign presence in many countries is not (yet) the result of trade openness but due more to historical factors. Historically high levels of foreign presence in otherwise closed financial systems

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<sup>25</sup> Possibly, controls on entry for portfolio investment (as captured by this variable) are not effective or they do not

without the possibility of new entry are likely to contribute much less to stability than foreign presence in open systems. As argued above, governments are less likely to introduce useful prudential regulation, adjust macro-policy making and end destabilising domestic financial sector interventions in a closed system, independent of whether it is dominated by foreign or domestic service suppliers. While this may explain the above findings, we would expect foreign presence to become a more important stability-factor in the future as liberalisation rather than history begins dominating these variables.

## **VI. Conclusions and policy implications**

The purpose of this study was to show the importance of financial services trade policy for capital flows and financial sector stability. The way countries liberalise financial services trade and what type of instruments of protection they apply determine the benefits countries can derive from liberalisation. We have argued and found significant evidence that a balanced liberalisation over the full range of financial instruments, and the liberalisation of foreign commercial presence with minimal strings attached contribute to less distorted and less volatile capital flows and to less crisis-prone financial systems.

What are the implications of these findings for countries' financial sector liberalisation strategies? First, liberalisation of capital flows and financial services trade liberalisation should not be confused. Second, countries with a weak financial system which fear that capital flows could exacerbate their problems may nevertheless benefit from the capacity building and efficiency-enhancing effect of certain types of financial services trade liberalisation. GATS commitments allowing the commercial presence of foreign institutions (without undue restrictions on their operations), and liberalising a broad range of instruments should be considered. Such liberalisation requires only limited liberalisation of capital flows in the GATS context. In other words, in countries with weak financial systems, what is sometimes called "modal neutrality", i.e., equal liberalisation commitments as between cross-border supply (mode 1) and supply through commercial presence (mode 3), may not always be desirable.

Many countries do allow more capital flows than required under GATS. For these countries, the combination of commitments suggested above is likely to promote a balanced instrument and maturity

(..continued)

capture the type of controls which really "bite" and restrict capital flows.

structure of foreign debt, making the financial system less prone to volatility and instability. The cross-border provision of financial services which typically do not involve capital movements, such as the provision of financial information also seems to be unproblematic from this perspective.

However, this does not mean that mode 1 liberalisation should be generally discouraged. Countries should only be aware of the stability trade-off arising from the required capital account liberalisation and the possible effect on the structure of capital flows. This makes the advisable policy and institutional prerequisites more stringent for mode 1 than for mode 3 liberalisation. A number of studies mentioned above discuss these prerequisites and some sequencing considerations. Countries with stable financial systems and a sound macroeconomic and regulatory framework have every reason to apply a very broad liberalisation strategy and commit to far-reaching trade liberalisation across all modes of supply, with full integration into global capital markets through capital account liberalisation.

Finally, two other concerns need to be addressed. First, some governments may wish to protect their domestic financial service providers to build a "domestic industry". Or they may attempt to use protection of the financial system to subsidise the infant-industrial sector (Henderson, 1998). Such motivations seem to be behind some countries' reluctance to liberalise commercial presence of foreign financial institutions in the domestic financial sector. If countries do not wish to liberalise mode 3 trade, does this mean they should not liberalise at all, given the potential "stability costs" of cross-border liberalisation? The answer to this questions depends on whether the efficiency gains outweigh the "stability costs" from liberalisation. If the efficiency gains are very large, and the costs relatively low (for example, due to relatively well-functioning supervision, transparency etc.), mode 1 liberalisation may be "second-best" to mode 3 but, nevertheless, preferable to completely closed markets.

However, a very old lesson from trade policy needs to be reiterated in this context: trade protection is not the first best choice for infant industry support or industrial policies (independent of the desirability of such policy objectives). If domestic financial institutions are protected from foreign competition for infant-industry reasons or if the financial sector is protected to allow quasi-fiscal support of infant-industries in the industrial sector, this can introduce significant distortions and long-term costs. Inefficiency in a variety of guises (unproductive investments, cronyism) often come with protection. The

quasi-fiscal costs of directed credits or controlled interest rates are an implicit tax which has to be born by the rest of the economy. The costs in terms of delayed financial sector development are not immediately visible but can be significant as well. Many financial crises have also shown that the costs of inappropriate financial sector intervention must ultimately be borne by the public when the government is forced to bail out the financial system in order to avoid its collapse. Given the high costs of many crises, it is probably less costly to achieve worthwhile public policy objectives through direct budgetary support rather than through intervening in the financial system and delaying valuable financial services trade liberalisation.

Second, the GATS framework explicitly allows for measures to be taken for prudential and balance-of-payments reasons which could include restrictions on capital transfers. These provisions are tantamount to a safeguard to prevent or solve a severe crisis. The benefits from recourse to such measures, however, need to be weighed carefully against their costs. Both the suspension of commitments and the re-introduction of capital controls can have considerable long-term costs through a higher risk premium on foreign investment (IMF, ICM, 1998).

The above arguments lend strong support for further financial services trade liberalisation in many countries. The GATS provides a useful multilateral framework for doing so, offering sufficient flexibility for countries to pursue an appropriate financial services trade liberalisation strategy, and yet take a more prudent approach towards capital account liberalisation when warranted. Such liberalisation also allows for the necessary degree of prudential regulation and supervision, and provides safeguard mechanisms against financial crisis.

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**Annex 1: Sample countries** (X = incidence of financial crisis during 1991-97)

Argentina  
Brazil (x)  
Chile  
China  
Costa Rica  
Czech Republic (x)  
Egypt  
Ghana  
Hong Kong-China  
Hungary (x)  
India (x)  
Indonesia (x)  
Korea (x)  
Malaysia (x)  
Mauritius  
Mexico (x)  
Morocco  
Philippines (x)  
Poland (x)  
Romania (x)  
Senegal  
Singapore  
Slovakia (x)  
South Africa  
Taiwan  
Thailand (x)  
Venezuela (x)



## **Annex 2: Summary of observations on financial services commitments by sample countries in the Uruguay Round**

(Uruguay Round Schedules, excludes the five sample countries without existing commitments)

### **- Argentina**

Very distinct difference in commitments, leaving mode 1 unbound and without limitations on mode 3, favouring commercial presence. No preference between lending and securities.

### **- Brazil**

Mode 1 unbound, but mode 3 appears restrictive as well. It is known, however that Brazil has been pursuing gradual liberalisation of foreign commercial presence in banking with the privatisation of state-owned banks. Strong restrictions on operations of foreign commercial presence in banking.

### **- Chile**

No bias in favour of mode 1 which is unbound for virtually all financial services. An economic needs test (or a national interest test) for mode 3. Measures to discourage short-term capital inflows (eliminated in fall 1998) were included in Chile's schedules despite their essentially prudential nature. No clear preference for either lending or securities. Discriminatory tax on foreign banks' deposits.

### **- Czech Republic**

Mode 3 appears more liberal than mode 1 with the adoption of the Understanding, and with foreign exchange controls inscribed in the schedule. Although mode 1 is explicitly left unbound in securities, no clear preference either for lending or securities.

### **- Egypt**

With mode 1 unbound, mode 3 is favoured, with a preference for joint-venture banks. Securities clearly more liberal with no limitations in modes 1 and 3.

### **- Ghana**

No preference between modes or between banking and securities.

### **- Hong Kong, China**

With mode 1 unbound, mode 3 is more liberal. However, foreign bank branches or subsidiaries can have offices in only one building. No clear bias either for lending or securities.

### **- Hungary**

With mode 1 unbound, preference exists for mode 3. Branches are, however, not allowed. Restrictions on commercial presence of securities firms appear more liberal than those on banks.

### **- India**

With mode 1 unbound, preference exists for mode 3. In mode 3, however, there are numerical restrictions on foreign bank branches, as well as a limitations on the foreign share in total banking assets. Mode 3 slightly more liberal for securities in which 51 per cent ownership by foreigners is allowed.

- Indonesia

In lending, a clear preference for mode 1, with full mode 1 commitments compared to restricted mode 3 commitments. With mode 1 unbound for securities, preference in favour of loans also exists. As a result of the most recent negotiations, mode 3 has been liberalised significantly for non-banks, but the situation with regard to banks has not changed by very much, except for grandfathering of existing foreign ownership.

- Korea

Although mode 1 has been kept unbound, preference may have existed in favour of loans compared to securities, due to restrictions on foreign portfolio investment concerning shares (and bonds). Foreign bank branches also have had very limited possibilities for domestic funding which may have led them to rely on imported capital. As a result of 1998 reforms, restrictions on foreign portfolio investment were relaxed substantially, and mode 3 has been significantly liberalised, thereby correcting the preference.

- Malaysia

With both modes 1 and 3 restricted, difficult to establish which mode is preferred. With emphasis on the establishment of offshore institutions, however, there may be a preference for establishment with a potential for creating large international capital flows. Slight preference for securities, with the banking sector unbound for new licenses and with many restrictions on branching and operations.

- Mexico

With mode 1 unbound, preference for mode 3 seems to exist. Slight preference for lending compared to securities, as underwriting appears unbound.

- Morocco

Preference for mode 3, as mode 1 is unbound for deposit-taking while fully bound for lending. Mode 3 is fully bound for banking and securities except for trading of foreign exchange and trading of securities for own account. A preference may exist for lending, as lending is fully bound both in modes 1 and 3, while mode 1 is not fully bound for securities.

- Philippines

With the entry "commercial presence required" in mode 1, preference for mode 3 evident. Securities more liberal than lending, as no foreign equity limitation exists for securities dealers, while for banks the limit is 40 per cent.

- Poland

With mode 1 unbound, preference exists for mode 3. Preference seems to exist for lending compared to securities, as trading in securities is entirely unbound. Foreign exchange controls retained in horizontal section of schedule.

- Romania

An apparent preference for mode 1 exists, as there are no limitations in mode 1 for lending, while an authorisation requirement and other limitations exist for commercial presence of banks. Trading in foreign exchange and securities completely unbound, resulting in a preference for lending compared to securities.

- Singapore

With mode 1 unbound for the most part, a slight preference seems to exist for mode 3, despite the fact that no new commercial banks are allowed, and no commitment is made for allowing new merchant banks. Only one office permitted for foreign banks, and many restrictions apply on their operations. Preference for securities apparently exists, as no limitations apply to securities trading and underwriting in mode 3, although new membership on the stock exchange is unbound.

- Slovak Republic

Mode 3 appears more liberal than mode 1 with the adoption of the Understanding, and with foreign exchange controls inscribed in the schedule. Although mode 1 is explicitly left unbound in securities, no clear preference either for lending or securities, except that a citizenship requirement exists for banks' board of directors.

- South Africa

With mode 1 unbound, preference for mode 3 exists. Lending is preferred over securities, as trading of securities and underwriting are both kept unbound.

- Thailand

With mode 1 unbound, a preference for mode 3 may have existed. Preferences appear to have existed in allowing different forms of commercial presence of foreign financial institutions, by allowing branches with IBF (International Banking Facilities) licenses priority in new establishment; since those entities do not have a domestic commercial base or any adequate means of funding, they may have acted as vehicles for excessive borrowing from abroad in the form of short-term loans. As a result of the 1997/98 reforms, mode 3 has been liberalised to a certain extent, thereby correcting somewhat the preference.

- Venezuela

With mode 1 unbound, a slight preference for mode 3 exists, although restrictions appear tight on mode 3 as well. Securities more liberal than banking.