

**An Exploration of GATS For Developing Countries:**  
**Impact of Financial Services on Financial Stability**

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## *Abstract*

The multilateral trading system was created to benefit developed and developing countries, particularly in the area of financial services trade. However, with respect to financial services trade liberalization, the idealistic notion differs from the realistic notion of trade policies regarding the General Agreement on Trade in Services (GATS). Our premise is that trade policies regarding financial services per the GATS are an important factor for countries to progress and develop, but such trade policies are often neglected in the case of developing countries due to the weak relationship between financial services trade liberalization and the macroeconomic indicators in developing countries. We question GATS “fair-access” to developing countries per its modes of trade given the macroeconomic conditions in developing countries by statistically testing whether relationship exists between the level of a developing country’s commitment to the openness in trade in financial services and its financial stability indicators. Our analysis exhibits that the strongest relationship exists between a developing country’s level of foreign direct investment (FDI), while other indicators do not exhibit a significant relationship. Therefore, trade policies vis a vi GATS current modes have not provided “fair-access” to developing countries and therefore, the costs outweigh the benefits of GATS financial services trade for developing countries today.

## **I. Introduction**

In sections I - III of this paper we attempt to explore GATS' in the area of financial services trade and analyze whether developing countries have benefited from financial services trade liberalization in terms of financial system stability, thereby attempting to seek whether an opportunity exists for developing countries to thrive through financial services trade liberalization. We will provide a historical perspective of the Uruguay Round and what it achieved, highlighting trade in the financial services. GATS will be examined and its modes of supply will be explained. In sections IV and V of this paper we will establish the implications of the recent financial crisis for financial services. Further we will discuss whether or not financial liberalization was a cause for the crises. In an attempt to find solutions to resolving the crises, some of which have been attempted and some are underway towards resolution of issues arising from the crises, we will indicate where liberalization of financial services trade has stood on good stead. Finally we will deliberate upon the linkages and establish some relationships between financial services trade liberalization and financial system stability. In section VI and VII we have undertaken an empirical study of 21 developing countries and indexed them on financial liberalization. Further we have identified suitable indicators of system stability and run regression analysis to establish the linkages proposed in sections above. Against the backdrop of the above, in section VIII we make policy recommendations to make GATS more effective in affecting financial system stability in developing countries while also deliberating upon sequencing financial services trade liberalization to avoid incidence of financial crises.

## **II. The Uruguay Round: A Historical Perspective**

Although there were seven rounds of trade negotiations prior to the Uruguay Round (1986-1994), it is arguable that the multilateral trading system was in actuality developed due to the negotiations resulting from the Uruguay Round, as it acknowledged the other half of the world, the developing world. The first six rounds (Geneva-1947, Annecy-1948, Torquay-1950, Geneva-1956, Dillon-1960-61, Kennedy-1964-67) concentrated mainly on tariff reductions and did not emphasize the needs of developing countries. The seventh round, Tokyo-1973-79, also included other such issues, resulting in tariff codes applicable only to countries that accepted them; therefore, not all countries were included. In general, the Uruguay Round was very comprehensive; it negotiated tariffs, and several other trade areas, and two non-trade issues, services and intellectual property rights. It also resulted in the establishment of the WTO (prior to that the international trading system was regulated by the General Agreement on Tariffs and Trade).

It is evident that the Uruguay Round achieved some key milestones, which have benefited WTO member countries. However, the incentive underlying the development of the Uruguay Round attests to the ongoing struggle between developed and developing countries, and builds the foundation for our analysis. After the Kennedy Round the primary incentive for developed countries had become to enter the markets of other developing countries, as the developed world was no longer viewed as the only source of raw materials. (Third World Network 2002) Developing countries, unfairly been excluded from past rounds, were given the opportunity to participate in the Uruguay

Round, but they initially declined from participating, as they attempted to leverage this opportunity. Developing countries did not want to enter the Uruguay Round until unfinished GATT issue of market access for developing countries by tariff reduction, clarification of strengthening some of the rules (such as comprehensive safeguards agreement) and ending voluntary restraints were resolved. Developing countries set these demands. However, the GATT process, which attempted to resolve these issues for developing countries was not successful. Developed countries were unable to compromise on the developing countries demands; the United States, Japan, Canada, and the European Union began meeting with some developing countries to gain support of the Uruguay Round, simultaneously developing countries such as Brazil and India revolted against this Round. Brazil and India believed that market access negotiations were significant for them, which the developed countries were not willing to compromise on. Regardless, of opposition from developing countries, the European Union brokered a compromise with developing countries and launched the Uruguay Round. The bargain used to attract developing countries was that they would negotiate on issues of services, trade-related aspects of intellectual property (TRIPS), and trade-related investment measures (TRIMS) in exchange for better market access in goods. The final outcome was that a number of WTO agreements were confirmed and trade negotiation rules established. At the conclusion of the Uruguay Round in December 1993 and upon signing agreements at the Marrakesh Ministerial meeting in 1994, TRIPS, the Dispute Settlement Understanding (DSU), GATT 1994, twelve other agreements in the goods area and the GATS agreements were established. One of the most significant outcomes

of the Uruguay Round was that it expanded the trading system by providing access to service markets through GATS.

### **III. The GATS & Financial Services Trade**

GATS was the first multilateral agreement intended to be a beneficial tool for developed as well as developing countries to assist their countries through trade in services. The GATS agreement, sets rules for trade in a variety of service markets including professional, computer/consulting-related, postal/courier, telecommunications, audio-visual, construction/engineering, distribution, education, environmental, tourism, recreational/cultural, transport, energy, oil and gas, and financial services. In general, GATS consists of two elements: a set of general concepts, principles, and rules that apply across the board to measures affecting trade in services, and specific commitments on national treatment and market access (these apply only to service activities listed in a member's schedule, reflecting the agreement's positive list approach to determine coverage, and only to the extent that sector-specific or cross-sectoral qualifications or conditions are not maintained, which will be described in the statistical analysis section).

With respect to financial services trade, the focus of this paper, trade in financial services promotes the use of a broad spectrum of financial instruments, such as equity, derivatives, loans, asset management, and a multitude of others which may fall in any of the following financial services sectors: banking and brokerage, asset management, trusts, lending from investment firms, mortgage banking, commercial lending, leasing, and any other financial services related to financial companies. Additionally, it allows the presence of foreign financial institutions in countries, establishment of subsidiaries.

“GATS is unusual in taking a wide view of what constitutes trade, and defines trade in services as the supply of a service through four modes of trade.” (Matto 1998) The first mode is *cross-border supply*, which allows international trade in goods, such that a product (service) crosses a national frontier. An example of this is domestic consumers taking a loan, purchasing securities or taking insurance coverage from a financial institution located abroad. The second mode is *consumption abroad*, such as consumers purchasing financial services while traveling abroad. The third mode is *commercial presence*, whereby a foreign bank or any other financial institution establishes a branch subsidiary in the territory of a country and supplies financial services; this mode includes foreign direct investment. The fourth mode is the *movement of natural persons*. This mode allows natural persons to supply a financial service in the territory of a foreign Member country.

In addition to the modes of trade, the GATS framework for recognizes trade in financial services primarily through two sub-sectors, insurance and insurance-related services and banking/other financial services. These sub-sectors encompass various financial services transactions as illustrated through Figure 1.

**Figure 1.**

<b>Insurance/Insurance-Related Services</b>	<b>Banking/Other Financial Services</b>
Direct life/non-life insurance	Acceptance of deposits
Reinsurance and retrocession	Lending
Insurance intermediation	Financial leasing
Auxiliary insurance (includes consultancy, risk assessment, claim settlement)	Payment and money transmission services
	Guarantees and commitments
	Trading (in money market instruments, FX, derivatives, exchange rate and interest rate instruments, transferable securities,



	financial assets)
	Participation in issue of securities
	Money broking
	Asset management
	Settlement and clearing services
	Provision and transfer of financial information (including data processing)
	Advisory and intermediation services

The GATS framework also introduces a crucial GATS obligation the most-favored-nation (MFN) principle. This principle is a particular advantage of the GATS negotiating process in that it stipulates that the rules of the system are based on non-discrimination among WTO members. MFN provides transparency and predictability conditions for trade, promoting rules-based system, rather than a power-based system. It deters Members from discriminating against their trading partners. The importance of this principle also lies in that it tends to decrease the barriers of trade for developing countries, as they are often discriminated against and dismissed from playing the trade game with developed countries. However, the GATS framework allows some member countries to seek exemptions from this principle. The United States, particularly in the case of financial services, has maintained exemptions from MFN due to agreements reached at pre-GATS negotiations in 1995. It is apparent that in some cases such exemptions hamper efforts to liberalize trade in financial services.

However, the extent of trade liberalization that is possible depends largely on the specific commitments of member countries in relation to the core provisions of market access and national treatment. Generally, market access for member countries is regulated by various limitations in reference to the modes of trade. The six types of limitations are as follows: 1) limitations on the number of suppliers; 2) limitations on the

total value of service transactions or assets; 3) limitations on the total number of service operations or on the total quantity of service output; 4) limitations on the total number of natural persons that may be employed; 5) measures which restrict or require specific types of legal entity or joint venture; and 6) limitations on the participation of foreign capital. The existence of any of these limitations has to be indicated with respect to each of the four modes of trade described previously.

National treatment supports that imported as well as local services should be treated equally once they have entered the market. Unlike the approach of the GATT, member countries may inscribe limitations on national treatment in their schedules, with respect to each of the four modes of supply, similar to the market access provision limitations. “The main reason for why negotiators eschewed the GATT approach of making national treatment an overarching principle of general application, as they did with MFN, is that granting market access with full national treatment is the equivalent of establishing free trade.” (Matto 1998) Member countries adoption of this rationale towards national treatment presented a more balanced and gradual approach towards opening up markets.

#### **IV. The Impact of Financial Crisis In Developing Countries**

There are two reasons why financial problems in the emerging economies merit particular attention: first, the serious consequences for the local economies and, secondly, the fallout on other countries as international financial markets have become more integrated. Financial crises in emerging economies are costly for industrial countries, particularly as the importance of emerging countries in the world economy and in

international financial markets has grown. Developing countries nowadays purchase about one-quarter of industrial country exports. In 1992–94, they received about 40% of global inflows of foreign direct investment. At year-end 1995, banks in the BIS reporting area had outstanding claims against developing countries of over \$717 billion (about \$46 billion more than their liabilities to these countries). Over the period 1990–95, developing countries issued over \$133 billion of bonds in international financial markets; at the time of the Mexican crisis, non-residents held about 80% of the tesobonos held outside the banking system. Portfolio equity flows into developing countries in the 1990s approached \$128 billion. While still very low (about 2%), the share of emerging markets in the portfolios of industrial country institutional investors has increased sharply over the past five years, and optimal portfolio calculations suggest that this share should continue to rise towards the emerging market share (13%) of global stock market capitalization. Honohan (1996) estimates that since 1980 the resolution costs of banking crises in all developing and transition economies have approached a quarter of a trillion dollars. Since the late 1970s, all IMF drawings have been made by developing countries. In short, to the extent that banking crises depress developing countries' growth and foreign trade, strain their ability to service and to repay private capital inflows, and eventually add to the liabilities of developing country governments, industrial countries are very likely to feel the repercussions.

There are numerous external sources of financial crisis. One external source of banking crises is the relatively large fluctuations in the terms of trade. When banks' customers suddenly find that the terms of trade have turned sharply against them, their ability to service existing loans is likely to be impaired. Volatility in international

interest rates, and the induced effect on private capital flows, is another important external factor. Indeed, empirical evidence suggests that movements in international interest rates can explain between one-half and two-thirds of the surge in private capital inflows to developing countries in the 1990s. Latin American developing countries saw net private capital inflows move from about 6% of host-country GDP in 1981 to practically nil during the 1983–90 period, back up to 4% in 1991, and then even higher, to 5-6% over the 1993–95 period. Similarly, for Asian developing countries which are members of APEC, net inflows in the capital account roughly doubled (as a share of host-country GDP) from 1984–88 to 1989–93. Incompletely sterilized capital inflows boost bank deposits and tempt banks to increase lending even at the expense of lower credit quality. Real exchange rates are the third member of the external volatility trio. Real exchange rate volatility can cause difficulties for banks either directly (when there is a currency or maturity mismatch between bank liabilities and assets) or indirectly (when exchange rate volatility creates large losses for bank borrowers).

On the domestic side, both growth and inflation rates are often highly volatile. Assessing credit risk becomes harder when growth and inflation rates fluctuate widely. For example, a company's credit history under hyperinflation may not be a good guide to its performance in a more stable environment. With greater macro-economic stability and fewer bad surprises for asset holders, a financial system will adapt in ways (e.g. longer maturities, a more diversified structure of financial assets) that makes banks less vulnerable to shocks. One important aspect of this is the dependence of terms of borrowing in international capital markets on the perceived creditworthiness of the borrower. Both interest rate spreads and maturities on international bond issues have

differed markedly across countries; for example, East Asian borrowers enjoyed in 1995 maturities almost three times longer than, and average spreads about half as large as, borrowers in Latin America.

A particularly relevant financial aspect of diversification for emerging economies is the role of foreign-owned banks. Because their portfolios are less concentrated in lending to firms in the host country and because they usually have access to external sources of liquidity and foreign exchange (from their parents abroad), they will be able to weather a shock to the local economy better than domestic banks. In Hong Kong, Chile and Malaysia – which have quite robust banking systems – the share of foreign banks ranges from very high to moderately high; in contrast, the foreign share is quite low in Korea, Mexico and Venezuela.

In a similar vein, restrictions that severely limit the portfolios of home banks to the local market work against the principle of diversifying banking risk; these restrictions should therefore be carefully reviewed to see whether they have another compelling rationale that outweighs their diversification liability.

Market instruments that can provide protection against volatility in international interest rates, commodity prices and exchange rates (via swaps, futures, options and the like) have expanded significantly over the past decade, and can reduce risks for creditworthy banks as well as for their customers. This insurance can be expensive just at the times when concern about volatility is the greatest, but this cost has to be weighed against the moral hazard risks associated with inadequate reliance on self-insurance.

Matched with controls or taxes on capital inflows (e.g. quantitative restrictions on foreign borrowing, requiring banks with foreign exchange liabilities to maintain a non-

remunerated account at the central bank equal to a specified ratio of such liabilities) did in some cases manage to slow inflows, but only temporarily. While large-scale sterilization operations employed by some countries restrained the growth of the monetary base there were indeed very large increases in equity and real estate prices recorded during the periods of heavy inflows.

If bank assets differ significantly from bank liabilities as to liquidity, maturity and currency of denomination, if bank capital and/or loan-loss provisions have not expanded to compensate for the volatility of bank assets, and if the economy is subject to large shocks to confidence (some stemming from external events beyond its control), then one can have a recipe for increased banking system fragility. In Mexico, as a result of rapidly rising ratios of M2 to GNP over the 1989–94 period and a precipitous decline in international reserves in 1994, the gap between Mexico's liquid banking liabilities and its stock of foreign exchange available to meet those liabilities in case of a run widened progressively. Before the December devaluation, the dollar value of M2 had climbed to a level almost five times higher than the maximum level of international reserves the country had ever recorded. Several other emerging economies had gaps of one-half to one-third that of Mexico (e.g. Chile and Brazil) and thus, by this measure, were much less vulnerable to attack. Between December 1993 and December 1994, the Mexican peso declined from 3.1 to 5.3 to the dollar and the foreign-currency-denominated liabilities of Mexican banks jumped from 89 billion pesos to 174 billion pesos; at the same time, the credit risk on their loans increased as interest rates rose and as economic activity fell.<sup>29</sup> Bank customers can also find themselves caught by currency mismatches.

Further, Calvo and Goldstein (1996) argue that advances in technology and information processing, combined with financial liberalization, have made it much easier for residents of emerging economies to alter the currency composition of their bank deposits. Similarly, the risks of maturity mismatches are typically higher for banks in the emerging markets because they have less access to longer-term sources of funding (on the liability side) and receive less assistance from securities markets in increasing liquidity and in spreading risks (on the asset side) than do banks in the industrial world. In Germany, for example, 45% of the liabilities of depository institutions are long and medium-term bonds; in Japan, roughly one-third of the financial system's liabilities are classified as insurance reserves, trust funds or bonds. The lack of deep government bond markets can likewise act as a handicap to banks with a pressing need for liquidity. Risk-sharing opportunities for banks may also be more limited. For example, if property companies finance themselves exclusively with bank loans (rather than supplementing bank finance with equity offerings) and if there is practically no securitization of mortgages, then banks will be more likely to grant loans with loan-to-value ratios that are too high, thus exposing themselves to sharp declines in real estate prices. Likewise, a large un-hedged debtor position in foreign exchange not only makes banks and their customers more vulnerable but also makes it harder to deal with a banking crisis once it occurs. This is because some of the traditional crisis-management strategies – easier monetary policy to reduce real interest rates and currency devaluation to reduce the real value of existing local-currency denominated obligations – will be much less effective when debts are denominated in foreign currencies.

Heavy government involvement and loose controls on connected lending have played an important role in the generation of banking crises because they allow the political objectives of governments or the personal interests of bank insiders (owners or directors) to intrude on almost all aspects of bank operations, damaging bank profitability and efficiency. While there are significant differences across emerging economies, most analysts regard existing accounting systems, disclosure practices and legal frameworks as hindering the operation of market discipline and the exercise of effective banking supervision; these weaknesses also often work to the detriment of bank profitability. Reducing government involvement and connected lending by getting state-owned banks to operate more like commercial enterprises is a viable option the process of which is facilitated by allowing bank privatization and entry of foreign banks.

There have been several approaches to combating the moral hazard of explicit and implicit government guarantees. One is “co-insurance” but some doubt that partial coverage may delay the closure of an insolvent bank (because of the need to negotiate with depositors). A second possibility is risk-weighted deposit insurance premiums, whereby riskier banks pay more for insurance. A third possibility is to provide deposit insurance through mutual liability (making groups of banks liable for members’ losses). Banking systems of developing countries need much more extensive standards and that compliance requires more explicit monitoring. Goldstein (1996b) has proposed that the time is ripe for an international banking standard that would go beyond existing Basle Committee agreements (on capital adequacy, consolidated supervision and co-operation between home and host-country banking supervisors) to cover many of the factors most



responsible for banking crises in developing countries. However, a single standard may not be flexible enough to accommodate the variety of country circumstances.

Fixed exchange rate regimes have also been criticized for increasing the fragility of the banking system to external adverse shocks. The reduced availability and higher cost of credit puts pressure on banks and their customers and add to any problems associated with the effect of the shock itself on the quality of bank assets. There is also a pressing need for stricter asset classification and provisioning practices that reduce the scope for delay in recognizing bad loans. The other issue concerns the role that credit ratings issued by private credit-rating agencies can play in enhancing market discipline.

Financial liberalization for developing countries inevitably presents banks with new risks which, without the proper precautions, can increase the danger of a banking crisis. When interest rates are liberalized, banks may lose the protection they previously enjoyed from a regulated term structure of interest rates which kept short-term rates below long-term rates. More generally, the volatility in interest rates tends to rise, at least during the transition. Rapid rates of credit expansion have often paradoxically coincided with high real interest rates in the wake of financial liberalization.

Lifting restrictions on bank lending often releases pent-up demand for credit in the liberalized sectors (e.g. real estate, securities activities). Lowering reserve requirements permits banks to accommodate increased loan demand – as does the inflow of foreign capital, often attracted by reforming economies. Yet bank credit managers reared in an earlier controlled financial environment may not have the expertise needed to evaluate new sources of credit and market risk. At the same time, the entry of new competitors (foreign and domestic) may well increase the pressures on banks to engage in

riskier activities. Easier access to offshore markets may also allow banks to evade domestic restrictions on riskier activities. One example of this is the use of customized derivative contracts in offshore markets to circumvent restrictions on net open positions in foreign exchange. Unless the supervisory and regulatory framework is strengthened before the liberalization of financial markets, bank supervisors may have neither the resources nor the training needed to adequately monitor and evaluate these new activities. Some or all of these risks associated with inadequate preparation for financial liberalization have been linked to banking crises, in Brazil, Chile.

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.

#### **V. Financial Services Trade, Capital Flows and Financial Systems Stability**

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.

Observers often fail to recognize that financial services liberalization does not necessarily imply capital account liberalization, with the consequence that liberalization in financial services trade may be held back for fear of its implications for the capital account.

The GATS requires only limited liberalization of capital movements in the context of financial services trade liberalization. Commitments to cross-border trade liberalization (mode 1) require the liberalization of capital inflows and outflows, which are an "essential part of the (liberalized) service". Regarding commercial presence, the GATS rules require the liberalization 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. Capital outflows related to the supply of services by foreign establishments do not have to be liberalized under GATS.

Second, many observers do not recognize 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.

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 liberalization. International openness improves the efficiency and institutional development of financial sectors through increased competition, skill and 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.

The study hypothesizes 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. The key point here is that certain types of liberalization are more conducive to financial stability than others. Liberalization which: (i) promotes trade in a broad array of financial 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. Stronger institutions, greater efficiency and more manageable capital flows, in turn, are likely to increase financial sector stability.

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 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. Consequently, some observers believe that short term capital controls could help in avoiding excessive short-term debt, speculation and volatility. As regards those countries which have not yet liberalized capital flows, a cautious liberalization of financial markets and capital flows is mostly favored, especially when the appropriate regulatory and macroeconomic policy framework is not in place.

With the objective of clarifying the relationship between financial services trade liberalization, 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 2)

Figure 2: Linkages between Financial Services, Capital Flows and Financial Stability

	By Mode of Supply		By Range of Instruments which can be supplied	
	Mode 1	Mode 3	Narrow	Broad
<b>CAPACITY BUILDING</b>				
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
<b>CAPITAL FLOWS</b>				
More capital flows	1	Limited/2	3	3
Bias towards (short term) lending	Strong	Weak	Possibly strong	Weak
Increased volatility	Strong	Weak	Possibly strong	Weak
<b>EFFICIENCY/LOCAL BENEFITS</b>				
More competition & efficiency	Strong	Strong	Weak	Strong
Skills/technology transfer	Weak	Strong	Weak	Strong
Local employment creation	Weak	Strong	Weak	Strong

*1: Member governments are committed to allow the movement of capital which is an essential part of the service itself*

*2: Member governments are not committed to allow capital outflows.*

*3: Depends on the instrument, mode of supply permitted, and market conditions*

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. Capacity building is unambiguously positive for financial sector stability and is likely to have a positive effect on institutional capacity.

### *Mode*

Commercial presence improves the institutional environment through better access to information and Transparency. 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 behavior and overreactions by investors. Commercial presence also increased the pressure to strengthen the regulatory and supervisory framework. Foreign institutions can help to make information on best practices 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 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. 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.

Liberalization 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. 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.

*Broad – Narrow range instruments or services*

Liberalization 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) 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. Broad-based liberalization also increases pressures to improve regulation and supervision across a broad range of financial services. Risk management becomes easier when certain instruments such as forward contracts and hedging of foreign exchange and interest obligations become available.

### *Restrictions*

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 behavior.

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.

The effect of financial services trade on “capital flows” is more ambiguous. As stated previously, financial services trade does not necessarily require capital account liberalization. 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

liberalization 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 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.

### *Modes*

As mentioned, commitments to mode 3 liberalization only require the liberalization of capital inflows related to commercial presence whereas mode 1 requires liberalization 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 liberalization.

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. 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.

*Broad – Narrow range instruments or services*

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 liberalization 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.

*Restrictions*

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.

With regard to the “pro-competitive effect” of financial services trade, liberalization should help to enhance the stability of financial systems in the long term. Liberalization promotes lower costs and more competitive institutions. It should be noted, however, that liberalization 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. 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 liberalization. In the short term, however, some domestic institutions may experience problems of adjusting to the new environment.

#### *Modes*

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 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.

#### *Broad – Narrow range instruments or services*

Broad-based liberalization 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 liberalized sectors such as lending; it can reduce the skill and technology transfer, render risk management more difficult and distort investment decisions.

#### *Restrictions*

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 practices. 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.

### **VI. The Empirical Analysis**

The purpose of this study is to design a statistical model that is able to predict the appropriate levels of FDI, GDP per capita and interest rate spread based on a developing country's liberalization index. The regression analysis will be used to determine whether

the relationship exists between the level of developing country's commitment to the openness in trade in financial services and its financial stability indicators; describe the nature of this relationship in the form of a mathematical equation and validate the accuracy of the ability of the designed model to predict the results of future changes in liberalization commitments on the country's financial stability.

Multiple regression analysis will be used to determine whether a significant relationship exists between developing countries' openness in financial services trade within the framework of GATS commitments and financial stability indicators as measured by FDI, GDP per capita and interest rate spread. If so we would specify the nature of this relationship in the form of a regression model and attempt to validate the accuracy our results in predicting the impact of future liberalization commitments on the developing countries' financial stability.

*Model*

The model that describes the relationship between the level of GATS commitments and financial stability is a linear function of the form:

$$Y_{FDI} = \beta_0 + \beta_1 * X_{mode1} + \beta_2 * X_{mode2} + \beta_3 * X_{mode3} + e \dots\dots\dots 1$$

$$Y_{INT} = \beta_0 + \beta_1 * X_{mode1} + \beta_2 * X_{mode2} + \beta_3 * X_{mode3} + e \dots\dots\dots 2$$

$$Y_{GDP} = \beta_0 + \beta_1 * X_{mode1} + \beta_2 * X_{mode2} + \beta_3 * X_{mode3} + e \dots\dots\dots 3$$

The assumption is that a country's financial stability on some level is dependent on the level of its commitment to trade in financial services. Thus, the liberalization indices for the three modes of supply are the independent variables and each financial stability indicators (FDI, GDP per capita, or Interest rate spread) is the dependent variable.

### *Hypotheses*

Null hypothesis:

$$H_0: \beta_1 = \beta_2 = \beta_3 = 0$$

(There is no relationship between the level of liberalization and financial stability).

*Alternative Hypothesis:*

$$H_1: \beta_1 \neq 0$$

$$\beta_2 \neq 0$$

$$\beta_3 \neq 0$$

(There is a relationship between the level of liberalization and financial stability).

### *Methodology*

Financial stability indicators are expressed as the percentage change in the magnitude of those indicators between 1997 and 2001. The years 1997 and 2001 were chosen based on the following assumptions: 1997 was the year when most commitments were made and when the markets in financial services were assumed to be closed and 2001 was the year when the markets in financial services are assumed to have been open to a degree and have produced some quantifiable changes in the country's financial stability. The change is measured using the following formula:  $[\text{GDP (2001)} - \text{GDP (1997)}] / \text{GDP (1997)}$ . For instance, Angola's per capita GDP indicator of 4.1869 means that growth in FDI in Angola from 1997 to 2001 was 418.69% or it increased 4.1869 times from the 1997 levels. Likewise, Venezuela's GDP indicator of -0.0281 means that GDP per capita in Venezuela decreased 2.81 % or 0.0281 times from the 1997 levels. Interest rate spread was derived by subtracting the deposit interest rate from lending interest rate.

Liberalization index is expressed as a ratio on a scale of “0” to “1”, where “0” means that no commitment on liberalizing trade in financial services was made and “1” means that a country made full commitment to financial services liberalization and has no restrictions whatsoever towards foreign companies supplying financial services instruments through any of the available modes. The weighted average of all the components of both Insurance and Banking Sector commitments in terms of market access and national treatment is the index.

The indices were quantified from the analysis of specific GATS commitments of 21 developing countries using the following weights:

No new entry/Unbound	0.1
Discretionary licensing/use of local labor force	0.6
Ceiling on foreign equity at < 50%	0.45
Ceiling on foreign equity at > 50%	0.75
Restrictions on legal form of commercial presence	0.85
Other minor restrictions	0.9

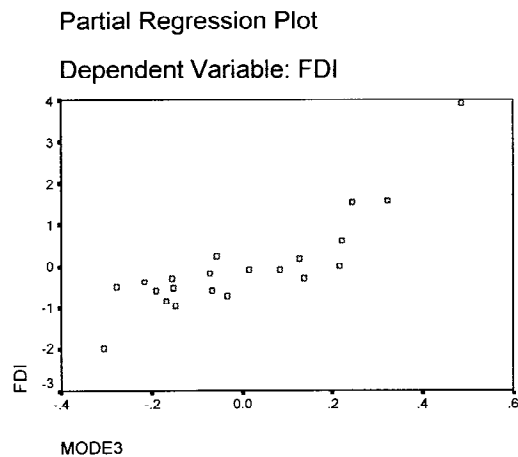
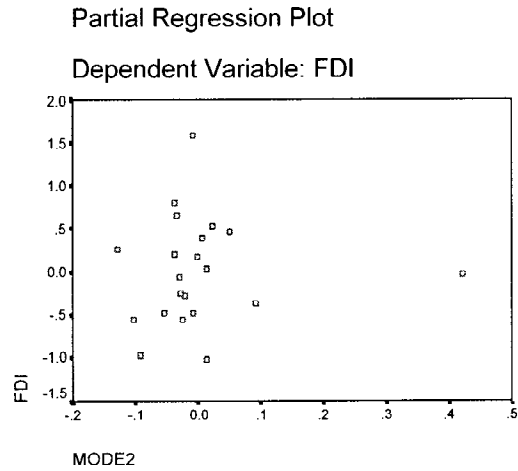
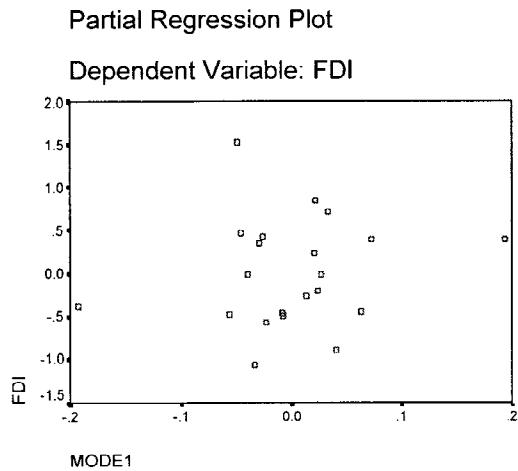


The missing values or “0” was recoded to 0.1 which indicated minimum to ‘none’ commitment. The overall liberalization indices by mode are as follows:

<b>Country</b>	<b>MODE1</b>	<b>MODE2</b>	<b>MODE3</b>
Angola	.0925	.055	.86
Argentina	.1000	.550	.23
Bolivia	.1000	.100	.15
Brazil	.1400	.050	.57
Bulgaria	.1000	.200	.46
Chile	.1000	.100	.21
Colombia	.0500	.050	.05
Czech Republic	.5900	.630	.71
Dominican Republic	.1000	.100	.69
Ecuador	.0800	.020	.59
Egypt	.0800	.070	.20
Hungary	.0900	.100	.57
India	.1000	.040	.21
Indonesia	.0750	.012	.06
Malaysia	.0125	.003	.26
Nigeria	.1000	.100	.30
Paraguay	.1000	.100	.22
Peru	.1000	.100	.20
Poland	.1000	.100	.45
Uruguay	.1000	.100	.61
Venezuela	.0600	.140	.15

*Analysis: FDI*

To begin the regression analysis we plot the dependent variable (FDI) against the independent variables (liberalization indices by modes) to see if the observations exhibit a linear relationship. The scatter plot below demonstrates a linear relationship between the two variables:



It is obvious that the strongest linear relationship exists through mode 3. That is consistent with empirical literature and explained by the fact that most of the countries so far made fewer to 'none' commitments on modes 1 and 2.

The unadjusted R square of 0.792 means that 79.2% of the variation in the FDI indicator can be explained by the level of commitment in financial services liberalization, that is 79% of the variance of the criterion variable (FDI) is accounted for by the predictor variables (mode 1, mode 2 and mode 3).

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.890 <sup>a</sup>	.792	.755	.6711594	1.890

a. Predictors: (Constant), MODE3, MODE2, MODE1

b. Dependent Variable: FDI

High F statistic of 21.577 for degrees of freedom  $df = 3, 17$  and the respective p-value of .01 confirms that the regression model is significant at 99% confidence level. The probability of the F value is approximately 19.45 for the given degrees of freedom  $df = 3, 17$  at 95% significance level assuming the null hypothesis.

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.158	3	9.719	21.577	.000 <sup>a</sup>
	Residual	7.658	17	.450		
	Total	36.816	20			

a. Predictors: (Constant), MODE3, MODE2, MODE1

b. Dependent Variable: FDI

The regression analysis produced the following partial regression coefficients:

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	% Confidence Interval for		Correlations			Collinearity Statistics		
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF	
1	(Constant)	-1.620	.284		-5.696	.000	-2.219	-1.020						
	MODE1	1.152	2.105	.098	.547	.591	-3.288	5.593	.472	.132	.061	.388	2.593	
	MODE2	.316	1.381	.038	.229	.822	-2.598	3.229	.275	.055	.025	.448	2.233	
	MODE3	4.770	.706	.834	6.754	.000	3.280	6.260	.882	.854	.747	.803	1.246	

a. Dependent Variable: FDI

The results can be put in the following mathematical equation or the model:

$$Y_{FDI} = -1.620 + 1.152 * X_{mode1} + 0.316 * X_{2 mode2} + 4.770 * X_{3 mode3}$$

The Unstandardized constant  $\beta_0 = -1.620$  is an intercept of the best-fit regression line with Y-axis of dependent variable ( $Y_{FDI}$ ) represents the value of Y when  $X = 0$ . The Unstandardized coefficients  $\beta_1 = 1.152$  for mode 1 and  $\beta_2 = 0.316$  for mode 2 and  $\beta_3 = 4.770$  for mode 3 show how much the dependent variable will change if each of the independent variables change, while holding the others constant. For instance, for a unit increase in mode 1 index (holding mode 2 and mode 3 indices constant), the FDI will increase by 4.770%. The coefficients are the relative contributions of the liberalization indices to financial stability. Their respective absolute contributions cannot be inferred because the model is based on their joint contribution. Also, no significant relationship can be inferred through modes 1 and 2. Only mode 3 is significant.

The p-value of .000 allows us to ascertain the significance of the entire model built. We can reject the null hypothesis in favor of the alternative hypothesis with 99% confidence.

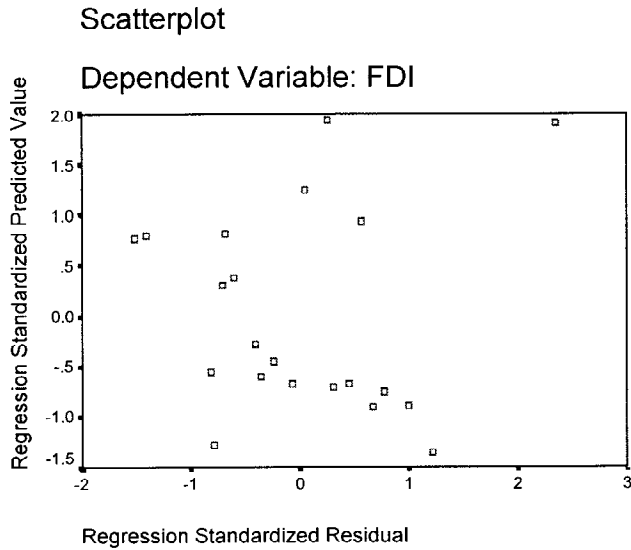
To ascertain that our regression equation is not simply a deviation by chance from a horizontal line we must analyze the residual errors.

**Residuals Statistics<sup>a</sup>**

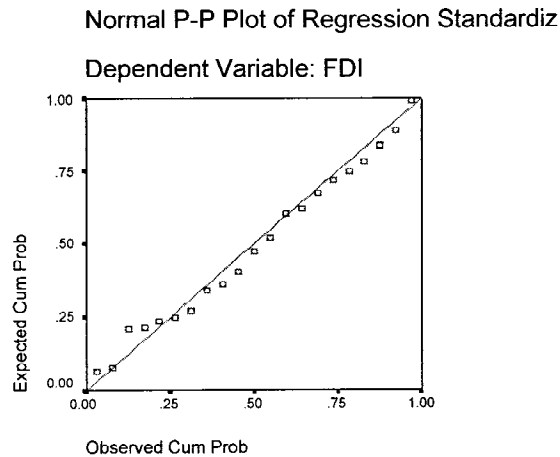
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-1.331515	2.645936	.303657	1.2074326	21
Residual	-1.021825	1.580130	.000000	.6187784	21
Std. Predicted Value	-1.354	1.940	.000	1.000	21
Std. Residual	-1.522	2.354	.000	.922	21

a. Dependent Variable: FDI

The analysis of the residual errors can be performed by plotting the residual errors against their respective predicted values. Homoscedasticity assumption requires that error terms be normally or evenly distributed. The following plot suggests that, indeed the residual errors are normally distributed. There is no pattern in the data points.



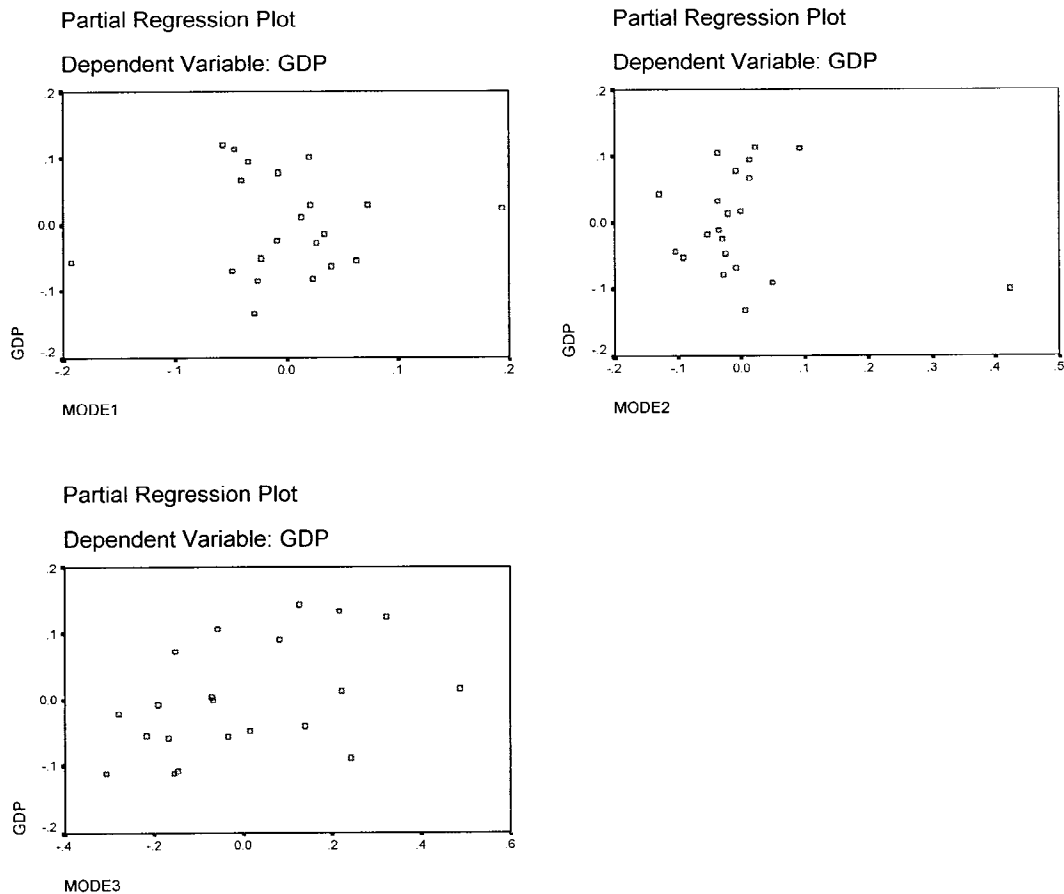
Testing of the regression hypothesis includes two steps. First is the analysis of the regression coefficients and residual errors, which in our case confirmed that the model is accurate. Second is validating the hypothesis. The graph below proves that hypothesis is valid and statistical model built is strong.



In summary, the null hypothesis that there is no relationship between the level of liberalization in financial services and FDI can be rejected at 99% confidence level.

## ANALYSIS: PER CAPITA GDP

Once again we begin the regression analysis with plotting the dependent variable (GDP indicator) against the independent variables (liberalization indices by modes) to see if the observations are positioned in a linear relationship to one another. The scatter plot below demonstrates the relationship between the two variables:



The relationship between per capita GDP and liberalization is once again the strongest on mode 3, although it is also evident that there is a lot of variance within the two variables for a given sample size, that might not produce a strong model.

The Unadjusted R square of 0.251 suggests that only 25.1% of the variation in the GDP indicator can be explained by the level of commitment in financial services liberalization, that is 25.1% of the variance of criterion variable GDP is accounted for by the predictor variables (mode 1, mode 2 and mode 3). This relatively small variance can be explained by the fact that many other variables influence the growth of GDP, among them, productivity, infrastructure, participation in global trade and competitiveness, many of these variables not influenced directly and significantly by the liberalization of trade in financial services.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.501 <sup>a</sup>	.251	.119	.0799919	1.614

a. Predictors: (Constant), MODE3, MODE2, MODE1

b. Dependent Variable: GDP

The low F statistic of 1.901 and p-value of 0.168 confirms that no significance can be established at 90% or above.

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.036	3	.012	1.901	.168 <sup>a</sup>
	Residual	.109	17	.006		
	Total	.145	20			

a. Predictors: (Constant), MODE3, MODE2, MODE1

b. Dependent Variable: GDP

The regression analysis produced the following partial regression coefficients:

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	5% Confidence Interval for		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.459E-02	.034		1.316	.206	-.027	.116					
	MODE1	.405E-02	.251	.046	.136	.894	-.495	.563	.076	.033	.028	.386	2.593
	MODE2	-.123	.165	-.235	-.750	.464	-.471	.224	-.105	-.179	-.157	.448	2.233
	MODE3	.175	.084	.486	2.076	.053	-.003	.352	.459	.450	.436	.803	1.246

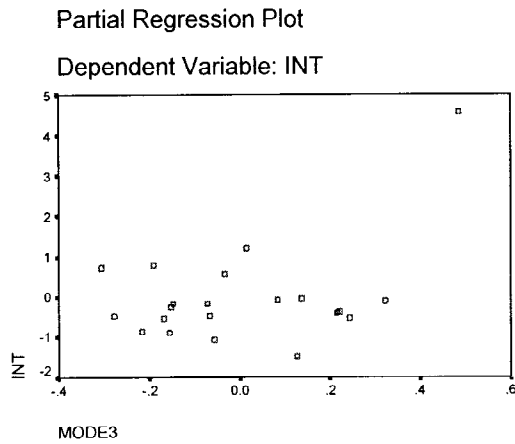
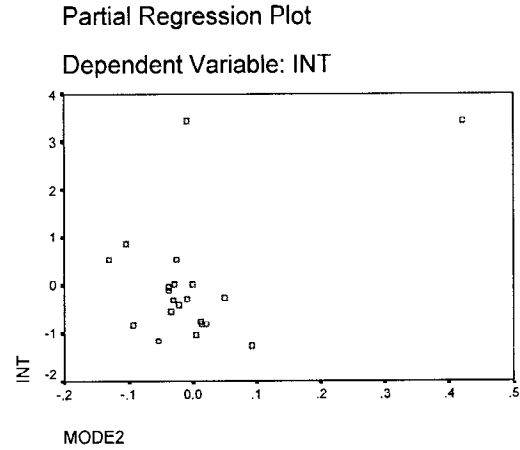
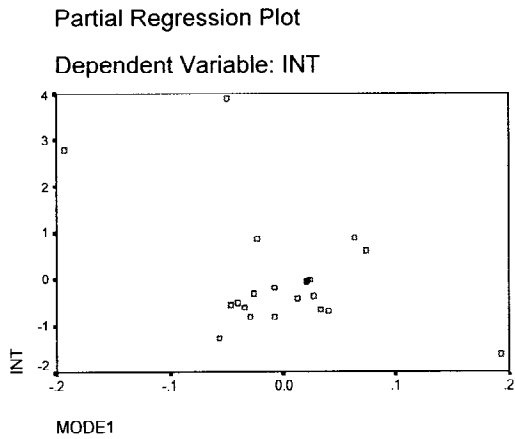
a. Dependent Variable: GDP

As a result, we cannot reject the null hypothesis that there is no relationship between the level of liberalization in trade in financial services and per capita GDP.

#### *ANALYSIS: INTEREST RATE SPREAD*

The scatter plots demonstrate that there is an inverse or negative linear relationship between the interest rate spread and mode 2 indicator and positive linear relationship between modes 1 and 3 and interest rate spread. This observation finds support in the literature reviewed above and follows the logic: as countries liberalize trade in financial services, more financial products at better prices or interest rates becomes available to consumers in developing countries. The local banks have to compete with other national and international banks for customers and market share. As they do that, they no longer are able to keep high prices or interest on domestic financial products. The interest rate spread (lending minus deposit rate) decreases. In a graphic form this relationship will be a downward-sloping line.





**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.529 <sup>a</sup>	.280	.153	1.2281318	1.198

a. Predictors: (Constant), MODE3, MODE2, MODE1

b. Dependent Variable: INT

The unadjusted R square of 0.28 demonstrates that approximately 28% of the variation in the INT indicator could be explained by the level of commitment in financial services (liberalization), that is 28% of the variance of criterion variable (INT) is accounted for by the predictor variables (mode 1, mode 2 and mode 3 indices). Based on the p-value of 0.125 the significance of the model cannot be assessed at more than 90% confidence.

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.968	3	3.323	2.203	.125 <sup>a</sup>
	Residual	25.641	17	1.508		
	Total	35.609	20			

a. Predictors: (Constant), MODE3, MODE2, MODE1

b. Dependent Variable: INT

**Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	% Confidence Interval for		Correlations			Collinearity Statistics		
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF	
1	(Constant)	-.281	.520		-.540	.596	-1.379	.817						
	MODE1	-8.407	3.851	-.723	-2.183	.043	-16.532	-.281	-.077	-.468	-.449	.386	2.593	
	MODE2	5.377	2.527	.654	2.128	.048	.045	10.709	.203	.459	.438	.448	2.233	
	MODE3	2.246	1.292	.399	1.738	.100	-.480	4.973	.229	.388	.358	.803	1.246	

a. Dependent Variable: INT

However, the significance of both modes 1 and 2 on interest rate spread is being established at 95% confidence as given by the low p-value of 0.043 and 0.048, respectively. Consequently that means that while overall model's significance is less than 90% (making us reject the null hypothesis that liberalization index alone cannot predict or guarantee a certain level of the interest rate spread in a developing country), the significance of modes 1 and 2 suggests that the liberalization in financial service trade that will involve deregulation of cross border supply and consumption abroad may have a significant impact on the interest rate spread.

*ANALYSIS: INT with transformation*

To increase the ability of the model to predict the effect of the liberalization on interest rate spread, another approach was tested. The interest rate spread variable was squared to magnify the slightest changes in the interest rates,  $INTSQ = INT^2$ . The model that resulted from such transformation has produced slightly higher unadjusted R square of 0.349, which means that the level of commitment in financial services could explain approximately 34% of the variation in the INT indicator. Low p-value of .058 confirms the significance of the relationship expressed by the regression model at 90% confidence. However, the low F value of 3.033 for the given degrees of freedom is not an indicator of a good fit model.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.590 <sup>a</sup>	.349	.234	4.62575	.963

a. Predictors: (Constant), MODE3, MODE2, MODE1

b. Dependent Variable: INTSQ

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	194.698	3	64.899	3.033	.058 <sup>a</sup>
	Residual	363.758	17	21.398		
	Total	558.456	20			

a. Predictors: (Constant), MODE3, MODE2, MODE1

b. Dependent Variable: INTSQ

Within the model, each of the modes 1,2 and 3 were found to be significant at 95% confidence level for their relationship to the interest rate spread. The evidence is given by their respective p-values of 0.032, 0.041 and 0.029.

Coefficients

Mode	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	% Confidence Interval for		Correlations			Collinearity Statistics		
	B	Std. Error				Beta	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	-1.453	1.960		-.742	.468	-5.588	2.681						
MODE1	-33.922	14.506	-.737	-2.338	.032	-64.527	-3.317	-.045	-.493	-.458	.386	2.593	
MODE2	21.074	9.519	.648	2.214	.041	.991	41.156	.210	.473	.433	.448	2.233	
MODE3	11.613	4.868	.521	2.386	.029	1.343	21.882	.344	.501	.467	.803	1.246	

a. Dependent Variable: INTSQ

### VII. Interpretation of Results

The analysis above proved that of the three indicators of financial stability studied, the level of liberalization in financial services trade has the strongest impact on the level of FDI. This impact is strongest through mode 3. This was proved at 99% statistical significance. The impact of financial services trade liberalization on interest rate spread and GDP per capita were not found to be statistically significant as expected.

It is important to mention the limitations of the study at this point. First, finding a robust model that is able to predict the effect of liberalization on financial stability requires a larger sample. It is to be expected that the 21 countries studied, as diverse as they may be, will have large variability in their respective levels of financial stability as explained by the 'weak' models estimated for GDP and INT indicators. Second, the stability indicators are limited in their scope of assessment of the overall financial stability in a developing country. Additional indicators are necessary (such as those that measure bank profitability, capacity building, number of financial instruments before and after the commitment was signed). Also, since the commitments were only finalized and agreed to by most of the countries in 1999, and the data analyzed is for 2001, the year of significant turmoil in the international economy, an analysis that will be conducted

several years from now will be a necessary step towards accessing the validity of the empirical evidence. Third, some of the countries between 1997 and 2001 have experienced dramatic changes, either financial or banking crises, deregulation and even war. The impact of these events on the level of FDI, GDP per capita and interest rates spread may be far more significant than commitments to merely one of WTO's trade agreement

### **VIII. Policy Recommendations**

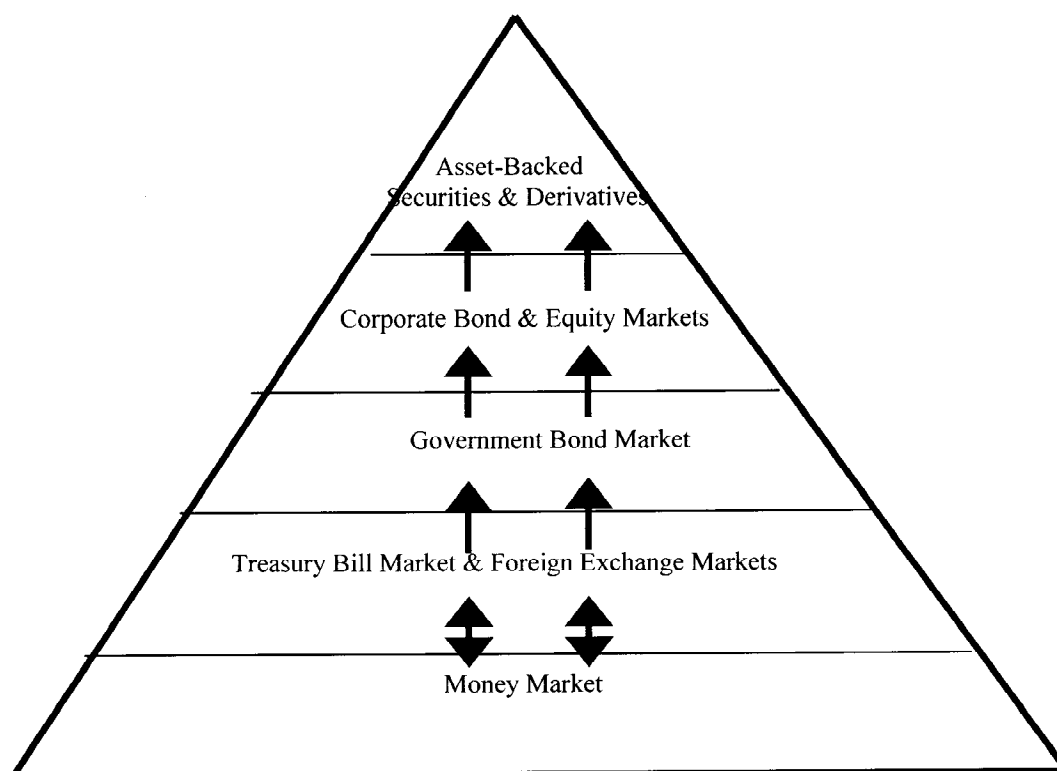
This study argued that trade policies regarding financial services are an important determinant of capital flows and financial sector stability. Financial services trade liberalization which promotes the use of a broad spectrum of financial instruments and allows the presence of foreign financial institutions whilst not unduly restricting their business practices, results in less distorted and less volatile capital flows, and promotes financial sector stability. In view of this there are two significant policy recommendation for developing countries.

Firstly, liberalizing 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. Even in countries where the financial system is weak, and where immediate, full-fledged financial sector liberalization is not advisable, certain types of financial services trade could be liberalized, as such trade strengthens the financial system without provoking destabilizing capital flows. A country which, for various reasons, is reluctant to liberalize all financial services trade and capital flows immediately, should still consider the liberalization of

those types of trade which promote stability and efficiency in the financial system and "buy" the time needed to establish the proper policy environment for broader liberalization later.

Financial liberalization should revolve around the hierarchy and complementarity of markets, and the related institutional structures. Markets are hierarchically (see figure 3) ordered starting with money markets, followed by foreign exchange, treasury bill and bond markets, and ultimately, markets for corporate bonds and equity, and asset-backed securities and derivatives. Markets and financial institutions are also complementary, with equity and debt markets as well as banking and nonbanking financial institutions complementing one another. The hierarchy reflects the degree and complexity of risks to financial stability posed by the development of each market, and the technical interaction between markets that link the depth of one market as a determinant of the depth of another. Capital market development hinges on a careful sequencing and coordination of reforms which follows this hierarchy and concomitantly minimizes opportunities for excessive risk-taking and possible loss of macroeconomic control created by financial reforms.

Figure31. The Hierarchical Order of Domestic Financial Markets



Capital account liberalization can play an important role in deepening domestic financial markets. However, there are trade-offs between having good domestic institutions in place before capital market liberalization on the one hand, and opening the capital account to import best practices to strengthen domestic institutions on the other hand (Prasad et al, 2003). These trade-offs suggest that there is no single optimal speed and order of measures to promote local financial markets and their integration with global markets. The pace and sequencing need to be decided in the context of country-specific circumstances and institutional characteristics. Some of the best practices and

considerations on sequencing of institutional and operational reforms are highlighted in this paper based on cross-country experience. In particular, building resilience to external shocks requires that before capital from abroad can play a constructive role, critical mass must be reached in terms of the depth of domestic markets, the diversity of local investors, the effective oversight and governance of market institutions, and the length and distribution of instrument maturities. Foreign capital can complement but not substitute for a domestic investor base that is critical to developing resilient domestic capital markets.

Developing countries need to engage in internal capacity building, as the macroeconomic linkages of capital flows, GDP and interest rates showed that internal development needs to be able to sustain financial services trade liberalization. Further, with liberalizing there may be costs associated for developing countries, particularly due to infrastructure issues and lack of macroeconomic stability in many such countries and the remedy for this is “safety nets”, which would make adjustments for these costs. An example where this policy recommendation can be implemented is Brazil.

Brazil is a case in point, depicting that excessive borrowing in loans, and other financial services instruments led to its external debt problems and how financial services trade did not work. In recent years Brazil’s public sector debt, including domestic and external debt increased rapidly. In 1997 the country’s external debt was at \$200 billion, which in just four years has increased to over \$231 billion this year. With low GDP, in quantifiable terms, Brazil’s external debt was more than 40% of GDP and about 330% of its exports. The growth of the net public debt over the years is also tremendous, with net public debt as a percentage of GDP from a modest 30% of GDP in 1994 to 59% in June



of 2002. The composition of Brazil's external debt in terms of stocks (the amounts outstanding at the end of each period) was as follows: long-term bank loans and debt securities abroad, and short-term debt liabilities to banks. Debt securities issued abroad, which are a substantial amount of this composition include money market instruments, bonds and notes issued in international markets by both public and private sector borrowers. Some of these include holdings of short-term securities, which are also included in liabilities to banks. The high debt indicator with further skeletons as well as other such as soaring interest rates, depreciation of the exchange rate and limited growth expectations, factor into creating impediments for trade in financial services in such developing countries.

## References

The Third World Network. (2002) The Multilateral Trading System: A Development Perspective.

Sorsa, P. (1997) The GATS Agreement on Financial Services – A Modest Start to Multilateral Liberalization, Washington D.C.: IMF Working Paper 97/55.

Levine, Ross (1997) Financial Development and Economic Growth: Views and Agenda, Journal of Economic Literature, 35: 688-726.

Krugman, Paul (1998) An Open Letter to Prime Minister Mahathir from Paul Krugman, Fortune Investor, September 1, 1998.

Mattoo, Aaditya. (1998) Financial Services and the WTO: Liberalization in the Developing and Transition Economies, Rue de Lussanne, Geneva.: WTO Working Paper.

On the International Financial architecture: Insuring Emerging Markets, Ricaordo J.

Banking Crises in Emerging Economies: Origins and Policy Options: by Morris Goldstein and Philip Turner, BIS, Monetary and Economic Department, Basle

Making Markets Work: How Domestic Capital Market Reform Can Improve Access to Global Finance, Peter Blair Henry and Peter Lombard Lorentzen, Stanford University, April 2003

Bisat, Amer, R. Barry Johnston, and V. Sundararajan, 1999, "Sequencing Financial Reform and Liberalization in Five Developing Countries," in *Sequencing Financial Sector Reforms: Country Cases and Issues*, eds. R. Barry Johnston and V. Sundararajan (International Monetary Fund: Washington, D.C.).

Bank for International Settlements (BIS) (2001), 71st Annual Report, Basle

Financial Market Development: Sequencing Reforms to Ensure Stability, by V. Sundararajan, Cem Karacadag, and Jennifer Elliott<sup>1</sup>

Caballero, NBER Working Paper No. 9570, March 2003.

Henry, Peter Blair. "Stock Market Liberalization, Economic Reform, and Emerging Market Equity Prices," Journal of Finance, 2000a, Vol. 55, No. 2