Privatization and Macroeconomic Financial Distress in Emerging Market Countries

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Abstract

This dissertation examines privatization and the relationship between macroeconomic financial distress and the propensity to privatize in emerging market countries. The research was undertaken to investigate the rationales of privatization and to attempt to explain the pattern and behavior of privatization in emerging market countries (EMCs). The central hypothesis under investigation is that countries with fiscal pressures such as high debt levels, significant budget deficits, and large current account deficits, ceteris paribus, are more likely to increase their privatization activities. The study begins by providing a background on privatization and state-owned-enterprises (SOEs) in EMCs. It then reviews the theoretical literature underlying privatization and financial distress. Next it provides a comparative profile of EMCs that have or are in the process of privatizing. The empirical analysis supports the hypothesis of a positive relationship between financial distress (with an emphasis on debt as a primary driver of distress) and privatization. In particular, higher levels of debt cause financial distress and unproductive investment and this in turn causes countries to privatize relatively more assets.

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Introduction

1.1 Introduction

This study describes the effects of financial distress and the motivations to privatize in emerging market countries (EMCs). The results presented support the notion that financial distress factors have a positive effect on privatization—i.e., that EMCs exhibit a higher degree of privatization in the face of macroeconomic financial distress.

The results are consistent with empirical work on financial distress in firms and countries that find that financial distress creates imperatives to divest assets. Previous empirical work on privatization focused mainly on economic efficiency within a specific industry or region or budgetary explanations. The results appear robust across industries and regions.

Extending the macro-empirical literature of the reasons surrounding privatization, the empirical investigation for this research tests the relationship between the level of financial distress and the incentives for privatization in a sample of 42 EMCs in different industries, industrial sectors and regions of the world over a ten-year period. The theoretical foundation of this relationship draws from general financial distress theory (Myers 1977; Milgrom and Roberts 1992). The empirical analysis employs various econometric specifications to find the best fit between the available data and the conceptual hypothesis.

This dissertation is divided into seven chapters. Chapter One presents a background on privatization and privatization in EMCs, the underlying motives for countries to undertake privatization and a background on the concepts of financial distress (with an emphasis on debt as the most significant component). Chapter Two provides a literature review of privatization and financial distress. Chapter Three discusses the emergence of privatization in EMCs and key characteristics of the trend. Chapter Four develops a series of testable empirical hypotheses. Chapter Five discusses the methodology and data of the analysis. Chapter Six discusses the empirical tests and results, and Chapter Seven summarizes the dissertation.

1.2 Emerging Market Countries (EMCs)

The phrase "emerging market country" was coined by Antoine Agtmael of the International Finance Corporation (IFC) of the World Bank (WB). An EMC is defined as: "a country with low-to-middle per capita income." Such countries constitute approximately 80% of the global population and represent about 20% of the world's economy (Agtmael 1993).

Although a loose definition, countries whose economies fall into this category, varying from very big to very small, are usually considered emerging because of their development and economic restructuring initiatives. Even though China is deemed one of the world's economic powerhouses, it is lumped into the category alongside much smaller economies with a great deal less resources, like Tunisia. Both China and Tunisia

belong to this category because both have embarked on economic development and restructuring programs, and have begun to open up their markets and "emerge" onto the global scene. EMCs are considered to be fast-growing economies (Ramamurti 1999).

1.3 Defining Privatization

Privatization has many connotations, meanings, techniques, processes, and policies. Moreover, no two countries privatize the same way. This section provides a working definition of the concept.

Privatization is generally viewed as a relaxation of government restrictions, which includes permission for minority private ownership in state-owned enterprises (SOEs), the appointment of private managers to positions of managerial responsibility in SOEs, and the participation of private concerns in enterprises previously considered state monopolies (Kolderie 1986).

The term privatization can also refer to the shift to private provision of goods and services. This may be accomplished through transfer of ownership of an enterprise to private investors through an asset sale, equity sale, or equity distribution (Ramanadham 1989). The final stage is when professional managers replace political managers. Another type of privatization is franchising and contracting out. Ownership remains in public hands, but the management of public assets or services is placed in the private sector for specific time periods and terms. Franchising typically implies the sale of a specific product directly to the public, for example electricity, water,

telecommunications, while contracting out implies payment by the government to the private provider of the specified product (Kikeri et al. 1992).

Privatization usually entails a reduction of the role of the state in the provision of goods and services to the population. In some instances, governments choose to retain ownership but transfer the managerial operations to the private sector. Hurl (1988) argues that privatization refers to the "sale of all or part of a government's equity in state-owned enterprises to the private sector." Governments perform two types of functions, either of which could be privatized. The first is production and the second is provision. Production is the action to produce that good or service, whereas provision is the policy to provide a good or service. For example in the case of electricity, government production would entail the state building, owning and operating power plants to produce electricity. Provision would be where electricity is provided by the state, but produced by privately owned and operated power plants.

Milgrom and Roberts (1992) view privatization as a move along the continuum towards greater specification of property rights. While they maintain that the concept of ownership is complex, privatization helps to allocate residual return and control more effectively.

Hanke (1987) describes privatization as a transfer of assets and service functions to private hands. Hanke cites service activities ranging from selling state-owned enterprises to contracting out public services with private contractors. Cook and Kirkpatrick (1988)

define privatization as the transfer of functions for which the government previously held a monopoly into the hands of the private sector. These functions are performed by the private sector at prices that clear the market and reflect the full costs of production, whereas they were performed at zero or below full-cost prices by the government.

Cook and Kirkpatrick (1988) see privatization as a range of different policy initiatives intended to change the balance between the public and private sectors. They make three main distinctions of privatizations: 1) a change in the ownership of the enterprise, 2) liberalization or deregulation and 3) transfer of a good or service from the public to private sector while the government retains ultimate responsibility for supplying the service.

Oman (1986) compares the approaches of industrial countries to less developed countries in privatization. He finds that for industrial countries, the sale of stock is essentially a financial issue, with issues such as finding the right merchant bankers, getting the correct valuation of assets, then finding a good price and putting the company up for sale. Developed countries usually have well-developed legal systems, a reasonably competitive market without excessive controls over prices and inputs, and a relatively open international trading structure. EMCs, on the other hand, are characterized by thin capital markets with few potential buyers for the state enterprise, a legal system intolerant of private activity, labor laws that are extremely restrictive in terms of who can be hired and fired, total or nearly total protectionism in the industrial sector, subsidized access to

credit resources, and a government that fixes wage and price levels (Davis and Harper, 1993).

The working definition which will be used for the purpose of the research is:

> *Privatization is an action that seeks to transfer in full or in part the government equity ownership or residual ownership (in the form of managerial control) of a public enterprise to private hands.*

1.4 State-Owned Enterprises (SOEs) in EMCs

The literature defines a state-owned enterprise (SOE) according to its characteristics and functions. An SOE is a distinct legal entity that is a) owned or managed by the government (the principle stockholder with 51% or more ownership); b) has an accounting system separate from the government unit that controls or supervises it; and c) is engaged in commercial, industrial, and financial activities involving the production and sale of goods and services from which it is expected to earn a significant portion of its revenue (Jones, et al. 1991, Savas 1982). In other words, SOEs constitute the business component of the public sector. It is where the state acts as producer of, or trader in, goods and services that are normally produced by a private enterprise (Berg and Shirley 1987). This function distinguishes SOEs from other public sector activities that are more clearly public goods, such as defense, police, health, and education, and therefore unsuitable for sale. These activities fall outside the scope of privatization in most EMCs.

SOEs in EMCs were established to achieve a host of objectives. According to Dinavo (1995), the objectives include creating and maintaining employment, redistributing income, reducing poverty, providing a more equitable distribution of goods and services and improving their range and quality, establishing and developing the infrastructure and industrial base, balancing or replacing a deficient private sector or taking over failed private enterprises, reducing dependency on foreign capital, filling in the gaps from market failures in the economy, and transferring technology to strategic sectors.

Until the 1980s, SOEs had been important financial and economic actors in many EMCs and had grown rapidly in both number and size. In most countries, they often dominated important strategic sectors like large-scale manufacturing, construction, finance, services, and agriculture. SOEs have been major borrowers in domestic and international markets, commanded a sizeable share of the state budget, and employed a large segment of the labor force (Jones and Mason 1982). Finally, SOEs differ significantly among themselves in several respects such as the independence of boards, the role of private shareholders, levels of government subsidies, and the extent to which the government is a customer (Vernon 1998).

1.4.1 Origins of SOEs

The emergence and expansion of SOEs can be traced back to the initial stages of industrialization and modern economic development in EMCs following World War II (Shirley 1983). Beginning in the early 1960s, SOEs were established to spearhead the drive to industrialization based on an import substitution development philosophy, and were seen as an appropriate mechanism to pursue social and economic goals (Ramanadham 1989). The public

sector was regarded as central to national development by providing crucial goods and services to consumers, and materials and resources to various industries within the economy.

A variety of economic and non-economic factors contributed to the establishment of SOEs in EMCs. The most common justification for government intervention was to compensate for market failures. Stiglitz (1994), addressing the issues of market failures and how to correct them, observed that the "SOE is one of the instruments used by public authority to correct market failures and reach an improvement in social welfare." According to Nunnenkemp (1986), "the market failure debate in economic theory contributed to a remarkable extension of public intervention into private markets in general and state ownership in particular." The "commanding heights" argument is another important reason for the creation of SOEs (Jones and Mason 1982). Here it is argued that certain sectors of the economy—owing to their strategic position and to the kind of "links" they generate—are so important to the development of the national economy that they cannot be left in private hands, regardless of whether the investors are domestic or foreign. The state must control these important industries (e.g., telecommunications, transportation, electricity, and natural resources). Furthermore, the creation of public ownership in many EMCs was a response to the unwillingness, inability, or lack of incentives by the private sector to undertake productive activities crucial to the economy's industrialization process, especially in the early stages of development. In these thin markets, sometimes governments felt there was no other path to initiate growth in critical sectors. The private sector in many cases had neither the capital, nor the technical or managerial skills, to establish new large-scale and risky projects in key industries (Liberman 1993).

SOEs also helped to correct social and regional development imbalances, reduced unemployment, and promoted public production work force training (Birdsall and Nellis 2002). These activities contributed to the rapid growth of the public sector in many EMCs, often alongside ideological motives.

The public sector has played a major role in the economies of EMCs. As Table 1.1 shows, by the early 1980s, SOEs accounted on average for 17% of the GDP in a thirteen country sample in Sub-Saharan Africa, 12% in Latin America, and 3% in Asia, compared with the 10% of GDP in mixed economies worldwide (Swanson and Wolde-Semait 1989). In some cases, their contribution has been considerably higher; for example, they produced 20% to 30% of the domestic output in India, Mexico, and Senegal. In Zambia and Venezuela, they accounted for more than half of gross domestic investment by 1984 (Milward 1988) yielding at least a quarter of the total capital formation. In countries as diverse as Bangladesh, Bolivia, and Mexico, the share of SOEs in annual gross investment has been upwards of 75%, close to 50% in India and Turkey, and has hovered between 25% and 33% in Korea and Brazil (Short 1984).

Table 1.1

SOE SHARE OF GDP AND INVESTMENT IN EMCS, 1976-82			
Indicator	**SOE's Share (%)**	**Range (%)**	**No. of Countries**
GDP			
Sub-Saharan Africa	15	4-48	18
Asia	3	1 -7	6
Latin America	12	2-28	8
Investments			
Sub-Saharan Africa	25	8-54	12
Asia	17	10-56	9
Latin America	19	7-47	17

Source: Swanson and Wolde-Semait (1989)

The emergence of SOEs in EMCs has had important international implications as well. In a variety of fields, EMCs have come increasingly to represent substitutes for, or competitors to, private multinational companies. This has taken place in Indonesia and India in the steel and mining sectors, and in Mexico's petrochemical industry.

1.4.2 Perceived Underperformance of SOEs

While SOE performance varies across regions and sectors, much of the literature argues that their economic and financial performance has been deficient (Aharoni 1986, Kikeri 1992, Savas 1982). Public investments that were expected to spur growth and provide profits to the government became a burden on the economy and a drain on public finances. SOEs also failed in many EMCs to enhance export growth or to provide the country with additional foreign exchange (Savas 1982). In other words, the claim of greater efficiency, initially used as an explanation for the rapidly expanding economic activities of the public sector, was quickly

replaced by short-term political goals, rendering SOEs primarily large employers and suppliers of highly subsidized goods and services to the public (Abu Shair 1997).

Despite the differences in measuring performance across sectors and regions, some general conclusions can still be drawn. Shirley (1999) states that "in most developing countries, SOEs have drained budgetary resources, contributed to the overall public sector deficit, weakened fiscal management, and made negative contributions to value added production." Ramanadham (1993) found that capital losses are a fact of most SOEs in countries such as India, Pakistan, and Chile. Another study of four African countries—Ghana, Senegal, Tanzania, and Zambia—also revealed poor performance. SOEs in these countries proved to be a massive drain on government resources, exhibited low labor and capital productivity, and were even less successful in generating employment (Karf and Smith 1996).

Vickers and Yarrow (1988), in their extensive analysis of the economics of public sector companies, argue that the poor economic and financial performance of SOEs is due to the characteristics of state ownership: lack of a stock price to indicate performance, insulation from the dissatisfaction of its customers, subjugation to claims of the political process, and lack of clearly defined property rights. Ayub and Hegsted (1986), Kirkpatrick (1989), and Prager (1992) show that multiple and conflicting goals, the lack of managerial independence and skills, over-staffing, the lack of efficient monitoring and incentive mechanisms, and protected uncompetitive market conditions were major causes of poor public enterprises performance in numerous EMCs. Although created to alleviate the shortcomings of the private

sector, many SOEs ended up stifling it by capturing a disproportional share of credit squeezing out private sector borrowing in a problem known as "crowding out" (Dornbusch 2000).

The reaction to this poor performance was a movement directed at improving the operational, managerial, and organizational structure of SOEs, and the economic environment within which they operate. One of the most frequently discussed steps is the separation of management from ownership through decentralization. Under the umbrella of decentralization, changes such as restructuring the enterprise, increasing managerial autonomy, and exposing the firm to market competition have been undertaken (Shirley 1983). The aim of these changes, by and large, was to maintain the role of the SOE in EMC economies by providing the "political will" to minimize bureaucracy and the abuse of power, and the "economic will" to correct unnecessary price and market distortions.

A study by the World Bank (1996) details the efforts of 12 EMCs to reform their state enterprises. The performance of their public enterprises was measured against metrics of success in three areas: financial performance, productivity, and savings/investment (as an indicator of the burden that SOEs place on the economy). The results were mixed. Chile, South Korea, and Mexico achieved the best results, Egypt, Ghana, and the Philippines had mixed results, and India and Senegal and Turkey had the poorest results. A breakdown of the study's results demonstrates that the success or failure in reforming SOEs depends directly on the ability of policymakers to affect five areas: divestiture, competition, hard budgets, financial reform, and changes in the relationship between government officials and SOE managers. All these reforms are designed to alter the incentives faced by managers of SOEs

(Shirley 1999). The conclusion of this study suggests that countries that most improved the performance of their SOEs followed a comprehensive strategy of reforms, which included a combination of privatization and corporatization measures.

The challenge of improving the efficiency of the public sector in EMCs lies in how to bring about sustainable improvements in SOE performance. This is a difficult task for EMCs for two reasons. First, there are many difficulties in coordinating the relationships that are required between government agencies, financial institutions, and the SOEs themselves. Second, previous attempts to increase the efficiency of SOEs have not been entirely successful because these changes were introduced in periods of crisis. Once the crisis passed, the changes have usually disappeared (backsliding, lack of broad support) and performance improvement has not been sustained (Shirley 1999).

To meet this challenge, a drastic shift in SOE restructuring measures began in the early 1980s in EMCs with the transfer of ownership of SOEs to the private sector. Faced with mounting SOE costs, and beset by increasing needs for funds to be used for many purposes, many EMC governments have sought to dispose of SOEs that had become a financial burden. Gradually, privatization took a life of its own and quickly became the central issue in the debate over the appropriate role of the state in the economy. Many governments began to ask themselves: should there be public ownership and state-led growth, or more market-friendly, outward-oriented economic strategies such as those that emerged worldwide by the mid-1980s? (Poole 1996).

Privatization became an important element in the extensive structural adjustment programs that many EMCs adopted in the late 1980s and 1990s. These programs were a response to internal economic imbalances and external pressures by multinational and regional lending agencies and financial institutions. Privatization was also given impetus by the integration of the global economic environment. EMCs have become increasingly integrated into the global economy. While this has produced, in many cases, positive results such as increased exports and capital flows, it has also led to EMC economies being exposed to elevated levels of competition and variability of the global economic system. Since the 1970s, EMCs have had to contend with the impact of two oil shocks, sharp declines in the prices of principle export commodities, high nominal and real interest rates, stagnation of financial flows, rising protectionism in the major export markets, and staggering external debt service burdens (Ramamutri 1992).

In addition, in some economic sectors the conditions conducive to state intervention no longer exist. Advances in technology, for example, have introduced competition into activities and sectors (e.g., telecommunications) previously monopolized by the state. The private sector in many EMCs has evolved and developed to the point where state control is simply no longer necessary (Clarke 1996). Finally, growing investor interest stemming from increasing globalization and foreign investment flows, especially toward EMCs, has reinforced the need to adopt privatization as a policy instrument throughout the world (Molz 1990).

1.5 Rationales for Privatization

The research into rationales for privatization can generally be grouped into three categories: 1) economic (Dinavo 1995, Ramanadham 1991), 2) social/political (Poole

1987, Schmidt 1996) and 3) financial (Guslain 1997, Barnes 1992, Bell 1995). The research has been dominated by economic and social rationales of privatization, in part because these explanations tended to focus on wide-scale policy changes that were contentiously debated and implemented in many countries around the world during the 1980s and 1990s and continuing today. These explanations often took center stage for many researchers. What research there is on financial factors tends to be focused on budgetary explanations, with little attention on overall financial distress factors (Cook and Uchida 2001, Krugman 1988, Sachs 1984, Sachs 1986). Barnett (2000) goes the farthest in his study on the fiscal and macroeconomic impacts of privatization. He finds that privation proceeds are used to reduce domestic financing. However, his aim is not to establish causality with privatization, but to explain how privatization proceeds are used after the fact.

The connection between financial distress theory and privatization has not been fully explored, and poses an opportunity to investigate its impact on the propensity to privatize. The central hypothesis of this study centers around the observation that countries experiencing "financial distress" such as high budget deficits, large current account deficits, low credit ratings, and, most importantly, *significant external debt*, show a disproportionate amount of privatization. The empirical investigation uses various econometric specifications to test this hypothesis.

1.5.1 Economic (Efficiency). Economic efficiency has been the most often cited rationale for privatization over the last two decades (Mackenzie 1997, and Vernon 1998).

Many social and political rationales could also be viewed as subsets of the overall efficiency rationale (Poole 1996). EMCs hoped that privatization will increase the efficiency with which firms use resources and generate more tax revenues as private companies (Kikeri, Nellis, Shirley 1992). There are four aspects of this rationale. First, privatization increases overall economic efficiency (Vickers and Yarrow 1988, Ott and Hartley 1991) as a result of the better use of inputs within the enterprise after divestment. Second, it improves the quality of goods and services, which can lead to the enhancement of international competitiveness of the enterprises, infusing them with capital, advancing their technology, and providing better management know-how. Third, it attracts new foreign and domestic investments that can accelerate economic development. Fourth, it develops efficient capital markets where private owners can realize the full value of their shares, newly privatized firms can raise funds and trade shares, and institutional investors can provide discipline to enterprise management.

1.5.2 Social (including income distribution) and Political (including ideological). Privatization is pursued in many cases in an attempt to achieve social objectives, such as broadening domestic equity ownership of economic assets, or popular capitalism (Guslain 1997, Bell 1995, Galal, Jones, Tandon and Vogelsang 1994, Birdsall and Nellis 2002). If the sale of public assets can be made attractive to small investors, then share ownership will increase in the population. Other rationales may include developing a national middle class or fostering the economic development of a particular group or region.

Political rationales include: a) reducing the degree of corruption and misuse of public property by government officials and SOE managers; b) reducing the size and scope of the public sector or its share of economic activity; c) reducing or eliminating the possibility of nationalization by successor governments; and d) strengthening the private sector (Aharoni 1986, Bos and Peters, 1988, and Dinavo 1995).

1.5.3 Financial. Many EMCs believe that privatization will decrease the demand made by SOEs on government budgets (Kikeri, Nellis, and Shirley 1992). The sale of SOEs can be a way of paying down the debt and reducing annual interest charges. Moreover since many SOEs also require government subsidies, the shift from government to private ownership may therefore involve a twofold ongoing fiscal benefit: the elimination of subsidies and increased corporate tax revenues (Poole 1996). This category can be divided into two. First, increasing government revenues from SOE asset sales is important. Maximizing net proceeds of privatization helps generate the public revenues needed to fund government expenditures, reduce taxation, and reduce the public sector deficit factors (Barnett 2000). Second, privatization reduces government expenditures and external debt through the reduction in the financial drain of SOEs on the state's budget and resources (Boubakri and Cossett, 1998, Zank, Nieder, Vickland and Ivey 1991). SOEs in EMCs account for one quarter to one half of all outstanding domestic debt, and for a substantial portion of foreign borrowing (Shirley 1983). Table 1.2 below summarizes the main arguments of each rationale.

Table 1.2

RATIONALES OF PRIVATIZATION
1) Efficiency of the Economy and Enterprises
• Create a market economy—the key objective in economies in transition
• Encourage private enterprise and expansion of the private sector in general
• Promote macroeconomic or sectoral efficiency and competitiveness
• Foster economic flexibility and eliminate rigidities
• Promote competition, particularly by abolishing monopolies
• Establish or develop efficient capital markets, allowing better capture and mobilization of domestic savings
• Improve access to foreign markets for domestic products
• Promote domestic investment
• Promote foreign investment
• Promote integration of the domestic economy into the world economy
• Maintain or create employment
• Foster the enterprise's efficiency and its domestic and international competitiveness
• Introduce new technologies and promote innovation
• Upgrade plant and equipment
• Increase productivity, including utilization of industrial plant
• Improve quality of the goods and services produced
• Introduce new management methods and teams
• Allow the enterprise to enter into domestic and international alliances essential to its survival
2) Social and Political
• Foster broader capital ownership and promote popular or mass capitalism
• Develop a national middle class
• Foster the economic development of a particular group (ethnic or other) in society
• Encourage employee ownership (also important for efficiency reasons)
• Restore full rights to former owners of property expropriated by previous regimes
• Enrich those managing or implementing privatization projects (rarely an admitted objective)
• Reduce the size and scope of the public sector or its share in economic activity
• Redefine the field of activity of the public sector, abandoning production tasks and focusing on core government functions, including the creation of an environment favorable to private economic activity

• Reduce or eliminate the ability of a future government to reverse the measures taken by the incumbent government to alter the role of the state in the economy
• Reduce the opportunities for corruption and misuse of public property by government officials and SOE managers
• Reduce the grip of a particular party or group (communist party, nomenclature, or labor unions, for example) on the economy
• Raise the government's popularity and its likelihood of being returned to power in the next elections
3) Financial and Budgetary
• Maximize net privatization receipts in order to fund government expenditures, reduce taxation, trim the public sector deficit, or pay off public debt
• Reduce the financial drain of SOEs on the state (in the form of subsidies, unpaid taxes, loan arrears, guarantees given and so on)
• Mobilize private sources to finance investments that can no longer be funded from public finances
• Generate new sources of tax revenue
• Limit the future risk of demands on the budget inherent in state ownership of businesses, including the need to provide capital for their expansion or to rescue them if they are in financial trouble
• Reduce capital flight abroad and repatriate capital already transferred

Source: Guslain, 1997.

1.6 Summary

This chapter provides a general overview of SOEs in EMCs and privatization. SOEs were largely created in EMCs after World War II to achieve various economic, socio-political, and financial rationales. A large number of SOEs achieved a certain level of success. However, a significant proportion exhibited poor operating and economic performance. This led many EMCs, beginning in the 1970s and continuing through the 1980s and 1990s, to adopt various measures to bring enterprises and their management under the discipline of the market. Privatization efforts have been largely promulgated as proactive and non-deterministic in nature. A central goal of this study is to explore the

relationship between financial distress and privatization as a possible deterministic explanation for at least some of the privatization in EMCs.

Chapter Two
A Literature Review of Privatization and Financial Distress

2.1 Introduction

The privatization wave that accelerated in the 1980s and continued through the 1990s resulted in a significant body of research. This literature review is divided into three sections. The first section discusses "ownership privatization"—the various methods and modes of ownership privatization processes—the leading form of privatization in EMCs and the focus of this dissertation. The second section focuses on the theoretical underpinnings of privatization, centering on efficiency and property rights. The third section focuses on the empirical literature of privatization and illustrates that there is no conclusive evidence supporting efficiency improvements, leaving open the possibility for another explanation. The fourth section discusses financial distress and the potential relationship between financial distress and privatization.

The greatest volume of privatization activity occurred from the late 1980s through the 1990s (OCED 2002), and the literature review reflects this timing bias (Cook and Uchida 2001). Nevertheless, pertinent research before and after this time period is addressed as well. The socio-political motivations, while important, are not discussed here because they are normative in nature and can be done irrespective of efficiency goals.

2.2 Ownership Privatization

While there many privatization models, the below section describes the main features of ownership privatization. This is the focus of this dissertation, as ownership privatization forms the bulk of financial transactions.

2.2.1 Ownership Privatization Modalities

1. **Divestiture**. This method involves transfer of ownership from the public to the private sector, and is the most common method of privatization. It takes two main forms. First, it could be a full sale in which the government bears no further responsibilities for the ownership and operation of the assets. Second, it could be a partial sale (i.e., partial divestiture) that involves the state retaining partial ownership of the assets (a special share), and leaving the management to the private sector (Pack 1991). The sale of the enterprise's assets can be conducted using the following techniques.
    a) **Direct Sale**. The owners of the SOE (i.e., the government) directly negotiate with a single investor for the transfer of equity. In some cases, the parties are brought to the negotiating table by other financial intermediaries (Katz and Owen 1993).
    b) **Initial Public Offering (IPO).** The shares of SOEs are offered on local and international capital markets. This method can be more difficult and costly in countries with weak capital markets, and is generally used for large and financially sound SOEs (Allen and Fauldhaber 1989).

c) **Auction**. A common type of selling SOE's assets to the highest bidder in open and competitive bidding process. Auctions potentially allow government to receive a fair price for assets while keeping the process equitable for potential buyers (Branco and Mello 1992).

d) **Stock Distribution**. In a number of countries, privatization laws mandate that a certain percentage of the shares of each SOE being privatized (between 10% to 25%) go to the workers or be sold to them at a discount (Bell 1995). Financing is often provided to those workers who are unable to afford shares.

e) **Voucher Privatization**. This is a form of ownership transfer and is often used in mass privatization programs. These programs enable countries to privatize a vast number of SOEs in all sectors using vouchers distributed to citizens. Eligible citizens are given or sold coupons or vouchers at a nominal price. These can be exchanged for shares in former SOEs (Cowan 1990).

f) **Management-Employee Buy-outs**. This technique has been used when assets of the enterprise are sold to its employees and/or managers. It is the most politically "acceptable" way for a country to divest itself of an enterprise. Occasionally, managers and/or employees may be ideal buyers for an SOE, especially for smaller enterprises when management is otherwise effective but performance has been affected by government directives and other operational controls. This technique is also used in cases where it is necessary to secure support from managers and labor

(who could potentially delay or sabotage the process), to minimize unemployment, and to protect against takeovers (Dinavo 1995).

2. **Joint Ventures.** Divestiture can take the form of joint ventures when foreign investors join the SOE to form a distinct legal entity (vehicle company) to which each party contributes assets (jointly own equity), allowing the distinction between public and private capital to be maintained (Molz 1990).
3. **Liquidation.** This method involves selling off the assets of the SOE by effectively liquidating the company debts. This approach is warranted in cases where there is no hope that the firm can be saved through internal restructuring (i.e., a combination of new investment, ownership, and operational changes).

Of the above ownership methods of privatization, the direct sale approach is the most prevalent, and accounts for the majority of privatization transactions in EMCs.

2.3 Theoretical Underpinnings of Privatization

The theoretical underpinnings of privatization are based on economic efficiency and the assignment of property rights.

2.3.1 Defining Efficiency

Efficiency is one of the primary concepts upon which privatization is based. There are two aspects of efficiency used when discussing privatization. The first is productive, or technical efficiency, which results when the lowest cost method of producing output is

utilized. If technical efficiency can be achieved, there are no wasted resources (Begg, Fischer, Dornbusch 1994). Second, allocative efficiency refers to the situations where resources are combined so as to produce the socially optimal level of output. This is also called Pareto efficiency. It is a measure of the extent to which relative output prices in the economy as a whole reflect their scarcity values, or when the marginal social cost equals marginal social benefit (Vickers and Yarrow 1988).

It is important to note that in the neoclassical theory of the firm, the relationship between ownership and performance is tenuous. There is no separation between ownership and control, and efficiency is seen mainly as a function of market and incentive structures. In other words, the claim that private owners are inherently more efficient than public owners is not supported in neoclassical microeconomic theory. It makes little difference whether a firm is privately or publicly owned as long as it operates in a competitive market without barriers to entry or exit, the owners instruct management to follow the signals provided by the market, and management is rewarded and sanctioned on the basis of performance (Nellis 1999). However, the subsequent development of the behavioral and managerial theories of the firm provided a new understanding of the objectives of the firm and deviations from the neoclassical assumption of profit maximization.

2.3.2 Property Rights and Ownership

Milgrom and Roberts (1992) state "the institution of ownership accompanied by secure property rights is the most common and effective institution for providing incentives to create, maintain and improve assets." The economic performance of state owned

enterprises has been blamed on ownership that was too dispersed for anyone to have clear property rights.

In SOEs, the failures in efficiency and investment are attributed to the fact that no one has sufficient incentive to maintain and improve the assets, because they cannot appropriate any returns from those activities (Grossman and Hart 1986). Managers have inadequate incentives to enhance the value of the organizations in their charge, unlike owners of private enterprises, because they cannot reap the full benefits of their efforts.

According to Coase (1937), if property rights are clearly assigned early, individuals have an incentive to work out efficient economic arrangements. It is argued that private ownership allows for a clear objective of profit maximization, which leads to more effective monitoring and incentive systems. Private ownership is equated with higher levels of managerial supervision, resulting in more efficient decisions in terms of pricing, investments, research and development, product innovations. The transfer from public to private ownership should result in more measurable objectives, which in turn should create the environment and incentives to monitor and control management more effectively (De Alessi 1980). While the absence of well-defined property rights frequently gives rise to distortions, *the clear assignment of property rights does not necessarily lead to efficiency.*

2.3.3 Allocative Efficiency and the Role of the Market

The assertion that private firms are more efficient and thus potentially more profitable than public firms cannot be complete without considering the market structure and regulation policies within which these firms operate. Possible gains in productive efficiency have to be weighed against the potential loss in allocative efficiency. The allocative inefficiencies that could result from divesting SOEs could be extensive in cases where capital markets are underdeveloped, market failures are common, and the institutional capacity of governments to regulate private monopolies is limited. If the losses are greater than the gains from productive efficiency, reforming SOEs may be a better course of action than full privatization (Galal 1991).

Hemming and Mansour (1988) point out that gains in allocative efficiency can be achieved if privatization is accompanied by policies that promote competition. The link between ownership change and competition lies in the effect of competition on the cost of information. Competition generates information and lowers its cost for the owners of the firms in the market (regardless of ownership) resulting in enhanced efficiency and improved monitoring of management behavior. One can argue that changes in firm performance have more to do with the nature of competition than with the form of ownership. Competition also drives price toward their welfare-maximizing levels by eliminating monopoly profits. The effects of competition can vary, however, in the case of many EMCs. Where SOEs still predominate, the competition from private firms will be insignificant. Where only a few sectors of the economy have been privatized, the effects of competition are likewise limited (Ott and Hartley 1991). Competition among

SOEs is often limited or non-existent due to the fact that they were typically established and maintained as monopolies.

A synthesis of the theoretical literature shows that the degree of efficiency gained by a firm depends on ownership as well as market structure. In general one can say that private enterprises with the objective of profit maximization operating in competitive markets are superior to large public enterprises facing monopoly markets. Small public enterprises facing competitive market conditions can do better than private enterprises in the same circumstance, but can do considerably worse. In large monopoly markets, theoretical predictions are ambiguous depending on the institutional details in place (i.e., how the private and public sectors are structured and motivated). Both private and public firms are similar in that they try to minimize transaction costs, but private firms are more sensitive to this pressure than SOEs.

It may be too simplistic to view privatization in EMCs as universally effective in solving all perceived deficiencies within the public sector. In cases where market failures are serious, government intervention frequently continues after privatization.

2.4 Efficiency (Performance) Empirical Studies

The empirical literature on privatization tends to examine privatization at the level of the firm itself comparing efficiency differences between public and private firms. This literature can be divided into three groups: studies that compare the performance of

privatized firms to those of SOEs, studies that compare a firm's pre-divestiture with post-divestiture performance, and studies that look at the effects of privatization on welfare (i.e., measuring allocative efficiency).

Before reviewing and evaluating the literature in each of the above groups, it is important to examine the limitations of the empirical methodologies used in measuring the effects of privatization.

The most salient feature of the micro-empirical literature is the diversity of its results. Two sets of conclusions emerge from this literature. The first finds the performance of private enterprises superior to that of public firms. Boycko et al. (1994) state "there is virtually a universal consensus that privatization improves efficiency." As might be expected, a second body of work reaches different conclusions. It finds no evidence to suggest inferior efficiency performance by SOEs operating at the same scale of operation as private firms (Aharoni 1986). Most of these studies emphasize the oft-noted observation that the inefficiency of government enterprises is caused by their isolation from market competition, as well as their constraints on practicing efficient management rather than from their public ownership. How can the two sets of conclusions be reconciled? The answer lies in several empirical and methodological limitations that account for the discrepancies.

In several studies, ownership tends to be examined independently of other important economic factors such as the institutional and regulatory environment, and the market

structure in which different firms operate. Tandon (1995) argues that "there are cases where privatization has not led to efficiency improvement; these are generally associated with situations where the degree of competition has remained unchanged before and after privatization." Tandon cites that where "there have been efficiency improvements, privatization appears to be contemporaneous with deregulation or other types of competition-enhancing measures." For example, a survey of 92 state-owned and privately-owned firms in the Republic of Georgia concluded that "it was not private ownership that was associated with restructuring [privatization]—or at least with what restructuring could be discerned, but rather the introduction of competition and financial discipline" (Djankov and Kreacic 1998).

Attempting to measure the contribution of an ownership change on economic growth is complicated by the fact that economic performance is likely to be affected by factors that affect the wider economic environment in which privatized enterprises operate. Privatization is often accompanied in EMCs by changes in economic policies. Significant attention has been focused on the process of deregulation and the importance of competition. Regulation is crucial for the improvement of efficiency in privatized enterprises (Vickers and Yarrow 1991). Unraveling the separate effects of policy changes and degrees of competition is difficult, and partly explains the relative deficiency of empirical analysis in this area. The other major constraint to the development of empirical investigations is obviously related to the short time period after privatization. Until relatively recently insufficient data was available to carry out studies capable of measuring the dynamic effects of privatization (Cook and Uchida 2001).

Nellis (1999) notes that in many EMCs "mass and rapid privatization had turned over mediocre assets to large numbers of people who have neither the skills nor the financial resources to run them well." Often the highest quality assets have been informally selected by insiders and elites of the country, and the assets that are available to privatize are older, more economically-challenged SOEs and industries. These outcomes occur most where EMC state structures are weak. This allows significant parts of the government to become captured by groups whose major objective is to use the state to legitimate or mask their acquisition of public wealth.

Capitalism requires more than private property. Capitalism functions only because of widespread acceptance and enforcement of fundamental rules, safeguards and institutions that make transactions secure, predictable, and widespread (Williamson 1985). Where such rules and institutions do not exist or are underdeveloped, as in many EMCs, performance of privatized companies will be suboptimal. North (1996) argues the way institutions evolve shapes long-run economic performance and ultimately the degree of privatization. Political and economic constraints, both formal and informal make possible successful privatization. Efficiency-enhancing privatization requires more than simply transferring assets from public to private hands. More fundamentally, it requires the development of a legal system that will embody the correct incentives of adaptive efficiency; the creation of effective and impartial enforcement by that legal system; the development of organizations made up of entrepreneurs who will invest in the kind of skills and knowledge essential to sustained increased productivity. Fundamentally, it

entails the establishment of an environment that will broadly support and enforce the new property rights.

Those studies that find the performance of private firms to be superior to SOEs do so for "illegitimate" reasons because they compare competitive private firms with monopolistic SOEs. On the other hand, the studies that compare reasonable competitive enterprises in both sectors find private enterprises superior for "legitimate" reasons (Yarrow 1986). When public and private monopolies are compared, the results are varied.

Furthermore, if comparing public to private firms simultaneously (at the same point in time) generates inconclusive results, one might be tempted to compare the performance of the same enterprise at different points in time (i.e., before and after privatization). This is problematic, however, because of the "counterfactual" claim of what would have happened if privatization did not take place. Another common problem with many empirical studies is selection bias. If a country embarks on a privatization program by selling its most valuable SOE, the performance of that enterprise is not necessarily indicative of how privatization might affect the public sector in general.

Finally, the lack of available data for empirical research exists here too. The poor financial data for SOEs in EMCs before privatization makes it difficult to measure the effect of ownership transfers. Even if the data were available, it might not be possible to draw firm conclusions because of the time lags involved in the assessment of performance, as the effects of ownership transfer may not materialize for years. The lack

of available time-series data on some privatization measures is another problem. Keeping all of this in mind, the following sections survey the conclusions of the three groups of micro-empirical literature on privatization.

There are a great number of studies of this nature. Among the studies comparing divested and undivested firms is one by Bishop and Kay (1988). It compares the performance of a number of divested enterprises in several industries with undivested enterprises in other different industries in the United Kingdom over the same period. The authors employ several performance indicators including revenue, employment, profits, profit margins, and total factor productivity. They find that both types of firms experienced improved performance. They leave the question of causality open to include the business cycle and the threat of privatization as possible causes. Mbowe (1993) compared 24 enterprises in Nigeria across four industries and finds that public enterprises produced lower performance (measured by return on investment), and were less efficient (measured by the annual turnover ratio). Perera (1992) finds the same with respect to Sri Lanka's public and private bus companies.

Boardman and Vining (1989) analyze the performance of the 500 largest non-U.S. manufacturing and mining corporations operating in competitive environments in 1983. Their study presents strong evidence that partial (mixed) privatization is worse than either complete state ownership or complete privatization in terms of the effect on performance. Hachette and Luders (1993) study the financial performance of a large sample of public and private firms in Chile during 1980-1987, and conclude that private firms as a group

were slightly more efficient than SOEs. They attribute the outcome to minimal political interference in SOE operations, and the positive effect of the Chilean government's hard budget policy during that period.

On the other hand, Millward (1988) evaluates the performance of public and private firms in a sample of EMCs over the period 1976-86 and finds no statistically significant evidence to suggest that private firms performed better. Likewise, Cakmak and Zaim (1991) study the comparative efficiency of private, public, and mixed enterprises in the Turkish cement industry, and find that the ownership factor had no effect on the economic efficiency of the different plants. They argue that market structure and size were the driving forces behind improvements in the productive efficiency of the 41 plants in the sample. Potts (1995) in his study of nationalization and privatization of Tanzania's agricultural SOEs, finds no conclusive evidence to suggest that the performance of the public sector firms was worse than that of the private sector in general. Similarly, Rausch (1995) examines the effect of ownership on performance for the largest 500 industrial enterprises in Argentina and finds no support for the claim that state ownership implies poor performance. His results emphasize the important of factors such as economies of scale, market structure, and industry trends.

In summary, the empirical literature provides inconclusive evidence about the widespread assumption that private enterprises are more efficient than their counterparts in the public sector. This does not prove that such differences are non-existent, but suggests that a careful analysis is needed to reveal them. The effects of private ownership alone and

property rights are not entirely supported by in the empirical work. Market structures, enterprise size, regulatory regimes, and other institutional factors have been found to play an important role in determining the efficiency of an enterprise.

The next section discusses financial distress theory and the potential relationship between financial distress and privatization. This discussion provides the foundation for the development of a series of financial distress hypotheses that will be tested later in the study.

2.5 Financial Distress Theory

Like firms, countries that are deep in debt may be unable to borrow money to finance promising new industrial development projects because any profits may have to be paid first to existing lenders. Krugman (1988) states that "a debtor country is like a debtor firm where creditors view the firm as having a stream of future revenues out of which debt service can be paid". . ."we can think of the expected stream of potential resource transfers from a country to its creditors as analogous to the expected stream of earnings from a firm". . .(and). . ." a country has a debt overhang problem when the expected present value of potential future resource transfers is less than its debt." Barnett (2000) links privatization with fiscal and macroeconomic performance, and cites evidence where privatization proceeds have been used to pay down domestic budgets, particularly in liquidity-constrained governments.

Bruno and Easterly (1996) argue that financial crises or stress in the form of high inflation which in turn triggers fiscal stress causes governments restructure their domestic budgets and privatize more assets. The reasons included "fiscal stabilization, central bank independence, privatization, and trade liberalization."

Jensen (1986) cites the costs of excessive leverage. Debt "creates the crisis to motivate cuts in expansion programs and the sale of those divisions which are more valuable outside the firm." The proceeds are used to reduce debt to a more normal or permanent level.

Lamont (1995) defines the problem of debt overhang as "existing debt deters new investment because the benefits from new investment go to the existing creditors rather than to new investors." Debt overhang creates a threshold value for investment returns; below it the firm cannot attract funds, and thus cannot invest. As a result, many otherwise profitable investments will be turned down. This can have the effect of stunting economic growth and, in the aggregate, making national economies more vulnerable to recession (Lamont 1995). Lamont argues that debt overhang can crowd out productive investment because all revenue must first go towards paying the debt service. National investment can suffer as countries must first service their external debt.

Zwiebel (1996) develops a model where managers of firms voluntarily choose debt to credibly constrain their own future empire-building. In contrast with standard free-cash-flow explanations, where the discipliner (at least implicitly) has more power ex ante than

ex post, the pressure on management to commit voluntarily to debt is derived from the constant presence of a potential discipliner. In particular, a sufficiently high level of anticipated future inefficiency is presumed necessary for a takeover. Bankruptcy is presumed to lessen this protection. Debt-constrained managers do not refrain from bad projects because they lack cash on hand to start up such projects, but rather because allocating limited cash flow to these projects increases the chance of future bankruptcy.

Titman and Wessels (1988), in their empirical study of capital structure, argue that managers of highly-leveraged firms are less likely to engage in excessive capital spending, since lenders are more likely to monitor capital outlays of those firms. The costs associated with this agency relation may be higher for firms with assets that are less collaterizable, since monitoring the capital outlays for such firms is more difficult. For this reason, firms with less collaterizable assets may choose higher debt levels to limit their manager's spending. They argue that equity-controlled firms have a tendency to invest suboptimally to expropriate wealth from the firm's bondholders. The cost associated with this agency relationship is likely to be higher for firms in growing industries, which have more flexibility in their choice of future investments.

Like firms, countries that are highly indebted may be unable to borrow money to finance promising new industrial development projects because any profits may have to be paid first to existing lenders. This situation is inefficient, because "value is lost from the underinvestment caused by debt overhang" (Milgrom and Roberts 1992). Milgrom and Roberts illustrate with the following example.

> Suppose a firm has an outstanding debt of $10 million more than the value of its assets and that it then obtains an opportunity to make an investment of $5 million yielding a sure gross return of $12 million for a guaranteed net profit of $7 million. If the debt covenants give the current debt priority for repayment, then no new lender or investor will be willing to finance the investment because the first $10 million accrues to holders of it existing debt, leaving only $2 million in returns for the $5 million of new investment. As a result, the profitable investment may not be undertaken and value may be lost.

Similarly, there is the problem of the cost of capital. Piling up more debt benefits shareholders only up to a point. That point, roughly speaking, is reached when bondholders are so worried about the company defaulting that the cost of its debt rises to unsustainable levels (Gilson 1997). To go on borrowing beyond that point may even lead to bankruptcy.

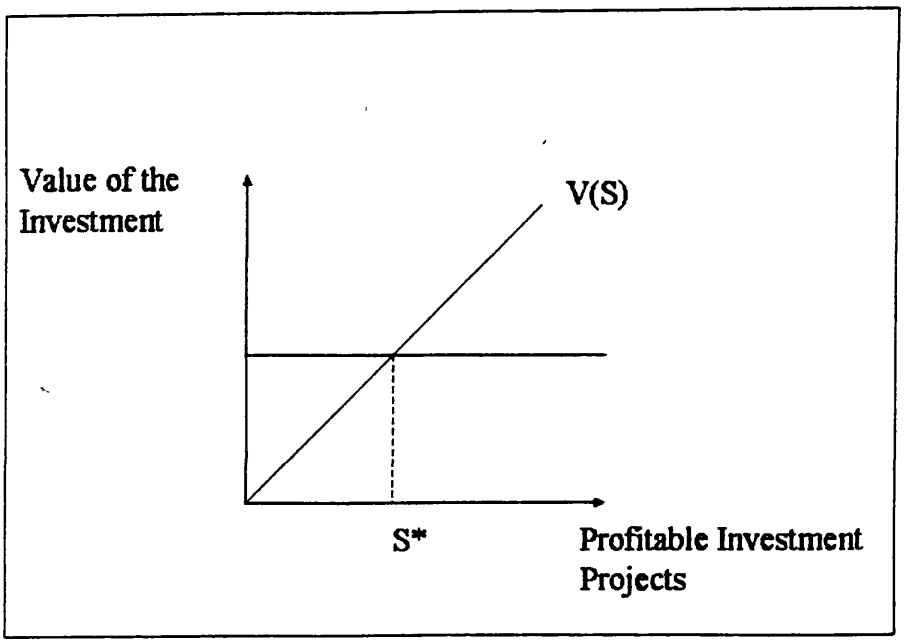
More formally, Myers (1977) compared the difference between managers' incentives to undertake one investment project in two different capital structures of the firm. The first case describes an all-equity financed firm, the second portrays a firm with a debt-equity capital structure. In both cases, the model assumes that managers and shareholders share the same information, managers act in the shareholders' interests, there are no taxes or bankruptcy costs, and capital markets are perfect and complete.

1. **All-equity Financed Firm**. A firm's market share (V) is determined by two different types of assets, the value of assets already in place (V_a) and the present

value of assets coming from the realization of future growth opportunities (V_g), such that, $V = V_a + V_g$. Without loss of generality, the firm in this case is assumed to have no assets in place. Ex ante, its market value is determined by the present value of all the investment options available to it. The model also assumes that there is just one year of investment that requires a disbursement of I at $t = 0$. In an all-equity scenario, if the firm decides to undertake the investment, new equity is issued to finance its cost. The revenue generated by the project at t=1 is given by V(s). If, alternatively, the firm decides not to exercise the investment option, no more shares are issued and the firm is worth nothing.

The investment should be undertaken if V(s) >= I which means that the Net Present Value (NPV) of the project should be greater than or equal to zero. Therefore, the firm would not invest in projects that generate a value of V lower than I. Figure 2.1 below shows this investment strategy. In those situations to the left of S* are economically unfavorable; the firm does not invest when they occur. The situations to the right of S* reflect profitable investment options, and consequently, the firm exercises the investment. The difference between the line V(s) and I indicates the net profit level as a function of S.

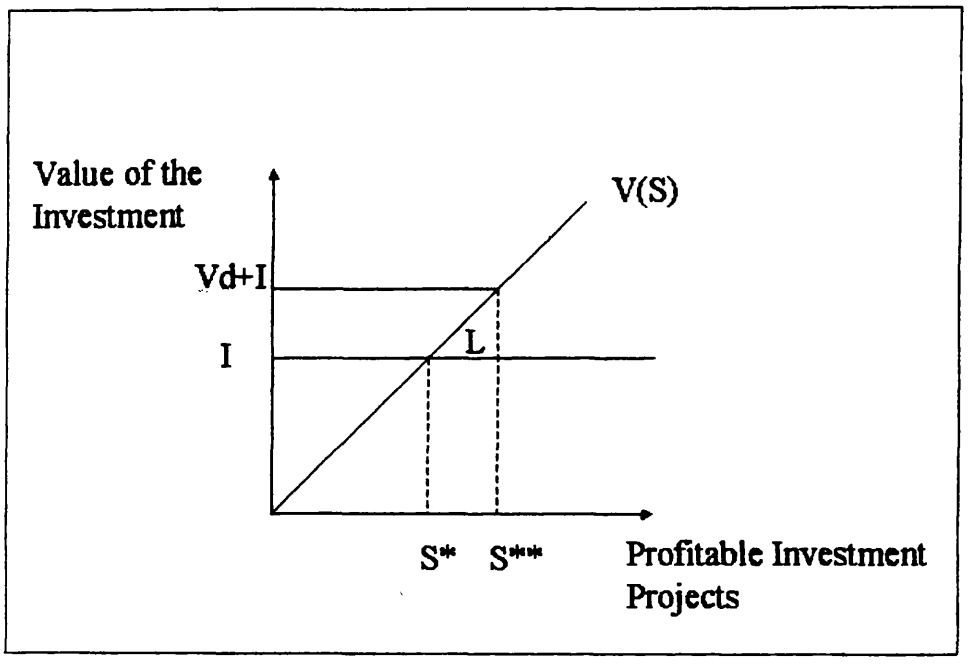
Figure 2.1 All Equity Financed Firm



2. **Debt-Equity Financed Firm.** Instead assume that initially the firm has a debt-equity capital structure. The outstanding debt, promised to be paid within a year, has a face value of V_d, and the value of equity is V_e. In this case, the firm issues new debt to finance the potential investment project. However, this debt is risky since there are states to the left of S* where the firm is worth nothing. The relevance of pre-existing debt occurs when the firm is expected to pay it back and the investment decision has been made. It is profitable to undertake the investment option as long as $V(s) - V_d - I > 0$ or $V(s) > [V_d + I]$. If $V(s) < V_d + I$ and the project is taken, the incurred spending would be larger than the market value of the shareholders and they would lose.

Figure 3.2 shows the investment strategy of managers in the presence of debt in the capital structure of the firm. Instead of having S* as a decision point, S** is now the threshold that makes V(S**) equal to $V_d + I$. Potential investment projects between S* and S** are neglected positive investment opportunities. The net loss is indicated by triangle L. Figure 3.2 shows as debt increases, a greater number of positive net present value projects cannot be undertaken.

Figure 2.2 Debt and Equity Financed Firm with Debt Overhang



Myers (1977) shows that a debt-equity firm with outstanding risky debt will follow a different investment decision rule than the one corresponding to a firm that does not issue risky debt or has no debt at all. Managers of a debt-equity firm (with value less than an equivalent all-equity financed firm), will demand a return on investments high enough to

cover at least the investment cost and the corresponding payment owed to debt holders. Thus, some investment projects that exhibit a positive net present value but do not satisfy the above conditions are neglected, resulting in a suboptimal investment policy.

Barnett (2000) develops a model for an indebted government to show the link between the indebtedness level of a country and privatization through the debt effect on the government's public investments. In his model, the government uses proceeds from privatization to pay debt service, and carries old debt from previous loans which mature in a limited period of time. It also faces new investment opportunities where it is expected that the revenues from these new investments will be shared with debt holders.

The model replicates the implications about suboptimal investment decisions reached by Myers (1977). It shows that the level of a country's indebtedness may discourage the government from undertaking positive net present value investments that do not benefit it. Excessive debt makes the government invest suboptimally in public companies, which in turn, reduce the firms' market value and generate less revenue to the government. Consequently, privatization becomes a more attractive alternative because the firm becomes more valuable in private hands, and the government receives the proceeds of the sale.

2.6 Summary

The economic rationale for privatization rests on the premise that the production of goods and services can be achieved more efficiently in the private rather than the public sector. This argument holds up only if the production costs of private ownership cannot be achieved under public ownership. The review of the literature illustrates that there is no intrinsic difference between public and private ownership. The observed differences in performance are due to differences in ownership objectives and in the nature of the market environment. Competition and regulation policies emerge as major determinants of the effects of privatization success.

While it is clear that economic performance differences between public and private firms provide important insights as to the effects of privatization, the empirical literature does not provide conclusive evidence that private ownership is superior. The often intractable measurement and data problems at both levels muddy the evidence and demonstrate why it is inconclusive. Financial distress theory indicates that divestiture of assets occurs when the costs of managing a financially distressed firm become too high. Excessive financial distress factors, particularly high external debt levels, create conditions for inefficient public domestic investment, which further lowers revenue from SOEs, making them more attractive for privatization.

Chapter Three
The Growth of EMC Privatization

3.1 Introduction

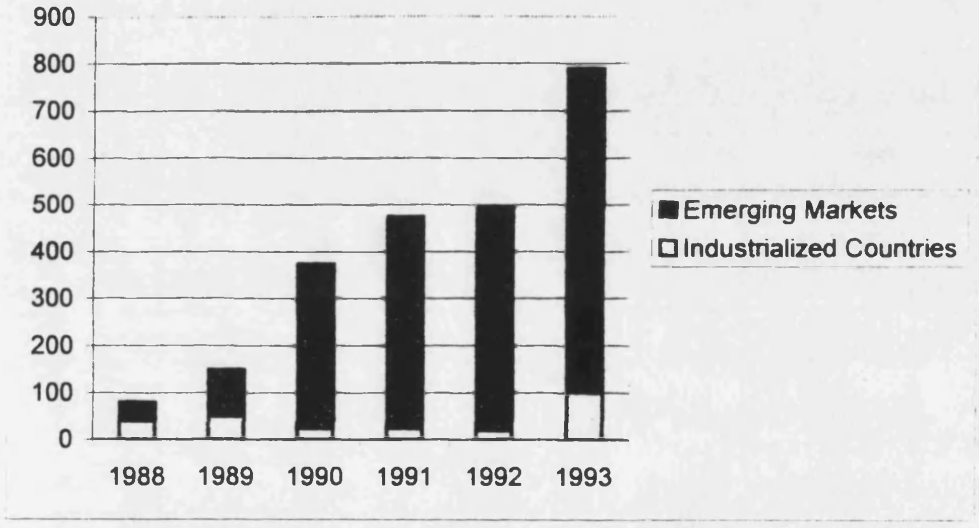
This chapter presents some stylized facts and patterns about the growth of EMC privatization in order to establish a baseline understanding of the data that will be analyzed in later chapters. Much of this data is from the mid-1980s to the mid-1990s, because this was the period of the greatest growth in EMC privatization yielding ample data and country diversity. Importantly, this period shows significant trends and features in EMC privatization (Abu Shair 1997) and sets up the discussion of patterns in the 1990s. Most EMCs in this study began their privatization efforts during this time. The data are also more complete than more recent years. The data show a great diversity in privatization among regions, sectors, and types of privatization. Though privatization efforts began earlier in OECD countries, it was during this period that EMCs countries began privatizing. By the late 1980s they had surpassed their OECD counterparts in the volume of privatizations (World Bank 1998).

3.2 The Growth of Privatization

The number of privatizations transactions worldwide grew rapidly during the 1980s and 1990s. Between 1988 and 1993, in over 100 countries across and more than 2,650 privatization transactions with sale value exceeding US$50,000 were recorded, generating total sales revenue of US$271 billion (World Bank 1996). Of these

transactions, close to 900 were carried out in 1993, against only 60 in 1988. Figure 3.1 below shows, EMCs accounted for much of this activity with about 85% of total transactions. However, their share in terms of sales proceeds accounted for only 35% of the total revenue from privatization between 1988 to 1996, (from only 7% and 12 countries in 1988 to 32% and 60 countries in 1996), amounting to about US$96 billion. The industrial countries had proceeds in excess of US$175 billion, owing to the dominance of industrial countries in large-scale sales.

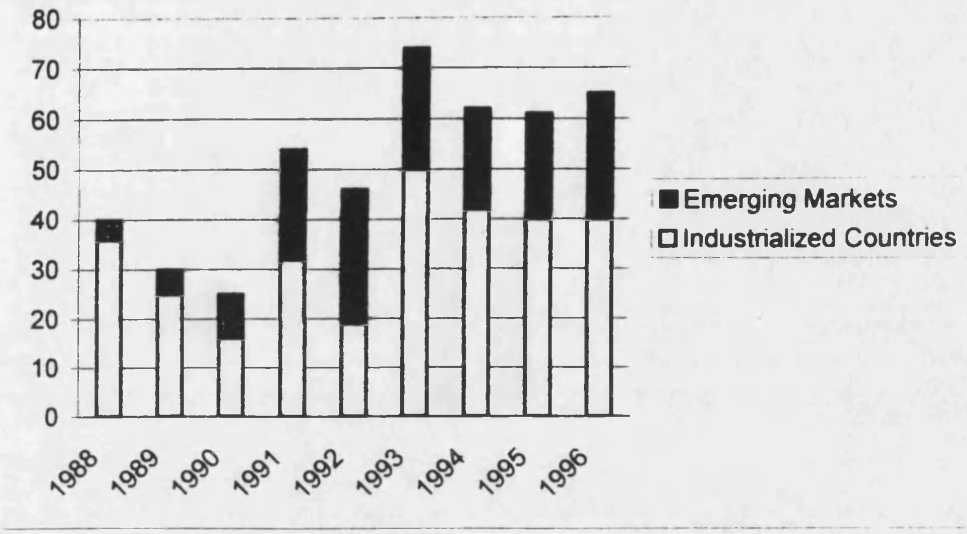
Figure 3.1
Number of Privatization Transactions Worldwide, 1988-1993



Source: World Bank Global Privatization Database, 1996.

Figure 3.2 shows the value realized from privatization in EMCs from 1988 to 1996. One can see the disproportion between the number of transactions and values, but that ratio changed in favor of EMCs over time. The figures show the increase in the total proceeds from US$40 billion in 1988 to a peak of US$75 billion in 1993. The total proceeds for the period were almost US$156 billion.

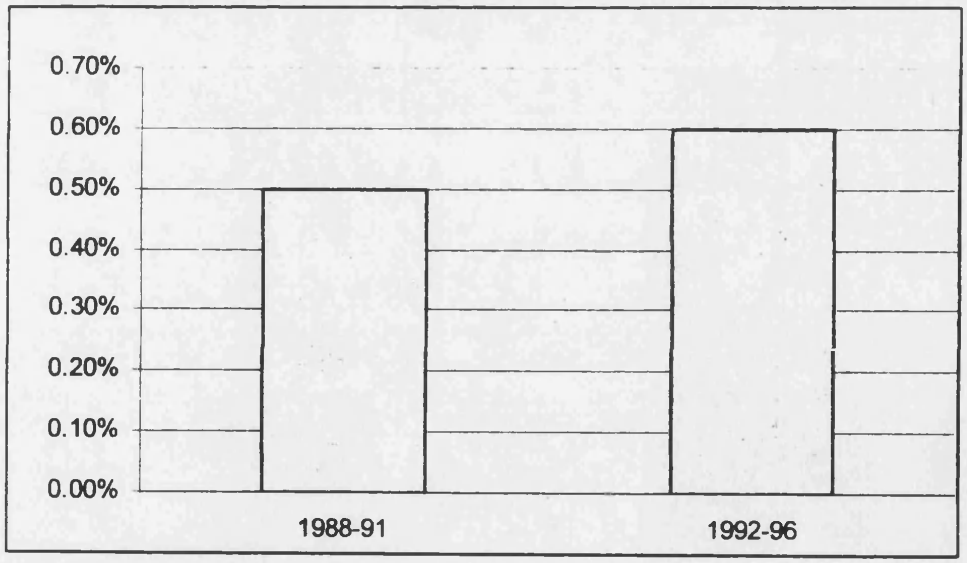
Figure 3.2
Value of Privatizations Worldwide, 1988-1996 (US$ billions)



Source: World Bank Privatization Database, 1996.

Their contribution to the total has also been increasing when taken as a percentage of GDP. Figure 3.3 illustrates that the total of this period, and the percentage of GDP contribution increased 20% (World Bank, 1995).

Figure 3.3
Privatization Proceeds in EMCs, 1988-96 (% of GDP)



Source: World Bank, 1998.

There is a clear pattern between the value of privatization activity and the income groups of the geographical regions. Lower incomes are associated with fewer sales. For example, OECD countries alone accounted for 70.5% (US$190 billion) of the total sales worldwide. Low and middle-income countries that comprise the majority of EMCs, on the other hand, accounted for less than 30% of the value of the sales between 1988-1994.

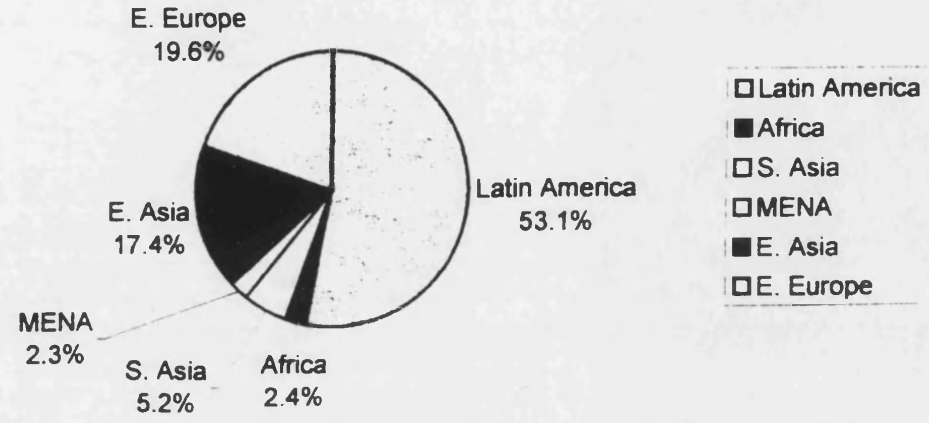
The remaining parts of this section present a comparative profile of privatization in EMCs between 1988 and 1996.

3.3 Regional Distribution

The level of privatization activities has varied significantly across EMCs.[1] As the figure below indicates, the most active region during this period of EMCs has been Latin America and the Caribbean (LAC), with total sales of almost US$83 billion, or 53% of the total amount of privatization proceeds in EMCs during 1988 to 1996.

[1] The regional groupings are based on the World Bank's classification. See Appendix D.

Figure 3.4
Regional Distribution of Privatization in EMCs, 1988-96



Source: World Bank, 1996.

Eastern Europe and Central Asia (EECA) are second with sales of US$30 billion, accounting for about 19%, followed by East Asia and the Pacific (EAP) with almost US$28 billion in sales or 17%. The rest of the regions were responsible for only about 11% of the value of assets privatized, with Africa and the Middle East and North Africa (MENA) accounting for the least. The rankings of the top three regions were heavily influenced by the average value of the assets that were sold. Even through the number of transactions in LAC and EA (783 and 258, respectively) were far less than in EECA (1784), the average value of an individual transaction was much greater. Broadly speaking, only a handful of countries in the data sample sold a large number of SOEs for large amounts in 1988-95 (e.g., Mexico's total realized sale value from 211 transactions was only US$27 billion). More countries sold relatively small volumes for large values. Brazil and Malaysia earned over US$9 billion each in sales, but had only 54 and 38 transactions respectively. Finally, some transition economies sold large numbers of SOEs for much less than the

average value of transaction. For example, Bulgaria had 269 transactions for only US$296 million.

3.3.1 Latin America and the Caribbean (LAC)

This region was the strongest privatizer among all regions in terms of sales volume. After a strong start in 1988, sales from privatization reached their peak in 1991 (US$18 billion). They then declined to about US$5 billion in 1995. This reflected the fact that several countries in the region (e.g. Mexico, Argentina, and Chile) had already sold off most of their SOEs. However, in 1996, the region raised more than US$14 billion, mainly as a result of Mexico's US$5.7 billion in privatization proceeds.

Mexico's privatization accelerated rapidly when President Carlos Salinas Gotari took office in 1988. Between 1990 and 1996, the government generated close to US$26 billion in revenue from sales of state-owned assets. The most important year for privatization was 1991, when the telephone company Telemex was sold (for US$5.9 billion) as were the two largest banks, Banamex and Bancomex. By 1995, most of Mexico's SOEs has been sold; privatization transactions and revenues declined rapidly.

Chile has been in the leader in privatization in LAC. Its privatization program began during the mid-1970s under Pinochet's dictatorship in reaction to the nationalizations of the former socialist government. Since then, the government has sold off the vast majority of its SOEs in several phases. By the end of the 1980s it

retained control of fewer than 50 of the 600 SOEs it had owned during the 1970s (World Bank 1996).

Argentina has been another strong privatizer in the region. President Menem, after his election in 1989, committed his administration to a massive reduction in the size of the public sector. By 1994, the government had sold 106 enterprises with proceeds of over US$20 billion. In addition, the government reduced the country's external debt by about US$17 billion through debt-equity swaps. In 1993, Argentina made a significant move by selling 45% of the shares of its petroleum company, YPF, through a public offering for a total of US$3 billion.

Peru's privatization program peaked in 1994 with revenues from privatization amounting to US$3 billion. Brazil only privatized 27 companies between 1988 and 1994 for a total of US$9 billion, well below the potential of its large, SOE-based economy. Venezuela's privatization program has been moving slowly in recent years, but was boosted in 1996 with the sale of the government's 49% stake of its television station for US$1 billion. In smaller countries in the region, such as Honduras, Jamaica, and Nicaragua, privatization efforts gained momentum in the early 1990s, but the process has slowed significantly since then due to political instability.

3.3.2 Europe and Central Asia (EECA)

The former centrally planned economies of Eastern Europe and Central Asia Republics of the Soviet Union have engaged in a massive process of selling their SOEs as part of the transfer to a market-oriented system. Between 1988 and 1993,

these countries sold more than 1200 SOEs, representing almost half of all privatization transactions in EMCs (excluding voucher privatization). However, the revenue generated from privatization in the region was not particularly large, and reached its peak in 1995 at US$9 billion.

Hungary was the most active privatizer in the region. The government sold about 180 SOEs for US$10 billion between 1989 and 1994. The Hungarian privatization program focused on privatization as part of an overall market-oriented reform program. It focused on revenue generation rather than on mass privatization through vouchers. In 1993, Hungary sold 30% of its telecommunication company, MATAV, for US$961 million. The country also moved towards complete banking privatization in 1996 with the sale of five of its six largest banks.

Poland follows Hungary in the magnitude of its privatization program. It sold 154 enterprises for a total of US$3.4 billion between 1990 and 1996. Russia, the country with the greatest potential, opted almost exclusively for voucher programs and conducted only a small number of direct sales. Finally, other countries in the region such as Bulgaria, Croatia, and Romania have established privatization programs, albeit with only minimal progress.

3.3.3 East Asia and the Pacific (EAP)

After a slow start between 1988 and 1991, privatization efforts in EAP picked up considerably in 1992 and 1993 with total revenues of over US$5 billion and US$7 billion, respectively. The trend slowed again in 1996 with total sales of about

US$2.7 billion. The mixed performance of the region's stock markets might have been partly responsible for the absence of privatization-related equity deals.

Between 1988 and 1996, the most intensive privatizers in terms of revenues from sales were Malaysia (US$9.3 billion, more than one-third of the region's total), China (US$8 billion), and Indonesia (US$5 billion). Although China does not have an official privatization program, it has sold stakes in SOEs to foreign and domestic investors on the Shenzhen, Shanghai and Hong Kong stock exchanges.

3.3.4 South Asia (SA)

Privatization transactions in SA reached a peak in 1994 with about US$2.6 billion. India dominated the region with more than 70% of the region's total revenues of US$8 billion. In 1996, the government sold US$370 million worth of the State Bank of India's equity, which was the largest equity offering ever from the country. Overall, the region's privatization projects have declined in recent years, owing to political and sociocultural obstacles.

3.3.5 Middle East and North Africa (MENA)

Egypt, Morocco, and Tunisia are the only countries in the region that have undertaken significant privatization transactions in the 1990s. Egypt's share of the region's total privatization revenue amounted to about 55%, followed by Morocco with 32%. In contrast to SA and EAP, privatization programs in MENA have accelerated in recent years, owing to Egypt's aggressive selling of a long list of SOEs that generated more than US$1 billion in 1996 (compared with only US$700 million between 1993 and 1995).

3.3.6 Sub-Saharan Africa

SSA had the smallest share (2.4%) of the total privatization revenues between 1988 and 1996, with only US$3.8 billion. Excluding two important South African sales in 1989 (US$1 billion), Ghana has led the region in terms of sales value (US$804 million), followed by Nigeria (US$730 million). Other countries in the region have created privatization programs that have shown varying degrees of success. Mozambique, for instance, privatized around 276 public companies.

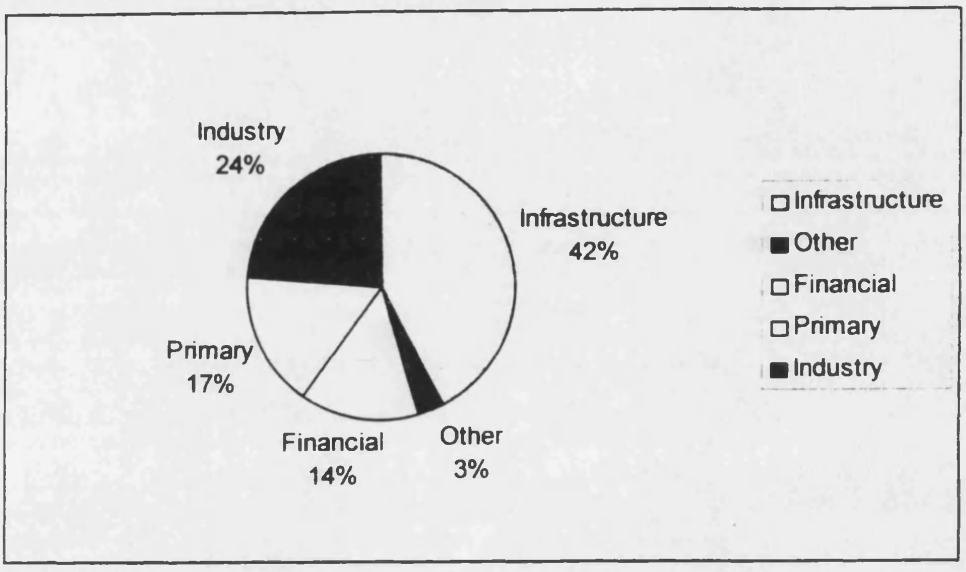
3.4 Sectoral Distribution

The regions also differ substantially with respect to the sectoral distribution, reflecting the varying degrees of public sector involvement. Infrastructure sales were significant in LAC as well as EAP. The other regions privatized mostly industrial and primary sector enterprises.

In terms of sales revenues based on sectoral distribution between 1988 and 1996, the data shows that in 1988, most sales revenues came from the primary sector. Since then, however, sales of SOEs in infrastructure and manufacturing sectors have grown rapidly, and now dominate privatization transactions in EMCs. The total proceeds from sales of SOEs in the infrastructure sector have accounted for 43% of the total privatization revenues in EMCs, and were largely concentrated in LAC—which helps to explain the high value of assets sold in this particular region. Almost no privatization took place in the financial sector until 1991, when many countries in LAC (Mexico in particular) began selling commercial banks. Figure 3.5 shows the

sectoral distribution of privatization transactions in EMCs for the period 1988 and 1996.

Figure 3.5
Sectoral Distribution, 1988-1996



Source: World Bank, 1996.

3.4.1 Infrastructure

Infrastructure privatizations dominated EMC privatization activity during the 1990s. These include sales in the telecommunications, power, and transportation companies. Privatizations of telecommunications assets, amounting to US$30 billion from 1988 to 1996, were the largest type of infrastructure sales in EMCs. Telemex, the telephone SOE for Mexico, was its largest privatization transaction with a total value of US$4.9 billion. Other countries in Latin America and the Caribbean privatized many of their SOEs in the telecommunications sector as well. East Asia countries, on the other hand, were weak in telecommunications sales, with only a small minority of shares sold in South Korea's company. Countries in other regions achieved practically no significant privatization in the telecommunications sector until 1994.

Privatization in power was significant with overall sales worth US$20 billion in EMCs between 1988 and 1996. The most important privatizer in this sector was Argentina, which sold its electric power utilities for US$2.1 billion and its gas distribution network for another US$1.8 billion. South Korea, Malaysia, and the Philippines also privatized some of their power utilities.

As for the transportation sector (airlines, railroads, and ports), the most significant sales were those of national airlines, which generated close to US$6 billion, or 80% of all revenues from transportation privatizations.

3.4.2 Manufacturing (Industrial)

Even though privatization transactions in this sector (steel, chemicals, construction, and light manufacturing) were concentrated in EECA, LAC countries produced the highest sales volume, with a value of almost US$10 billion between 1988-1994 from sales of large chemical and steel plants (e.g., Mexico's USIMINAS). Other regions lagged behind.

3.4.3 The Primary Sector

Since SOEs in the primary sector (petroleum and mining) often symbolize wealth and independence, most governments had not considered privatizing them (e.g., Saudi Arabia's Saudi Aramco). When Argentina began to sell its petroleum company in 1993, it signaled to the international markets the country's complete dedication to pursuing privatization. Argentina received US$4.3 billion from petroleum-related privatizations between 1990 and 1993.

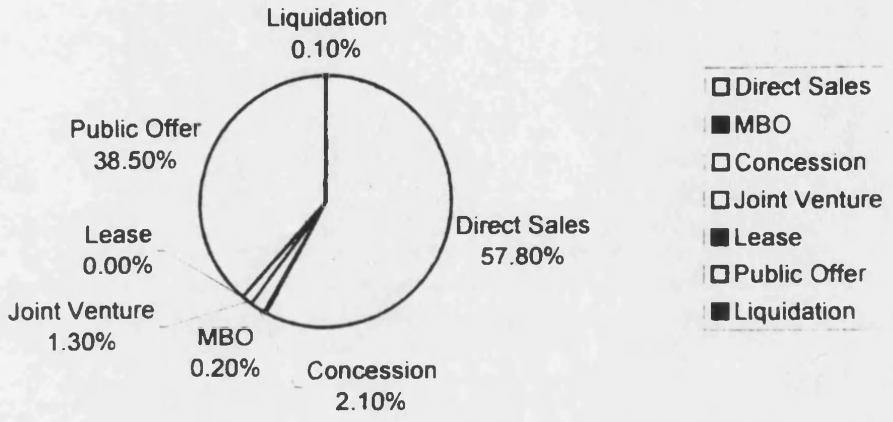
3.4.4 The Financial Sector

Between 1988 and 1996, sales of publicly held financial institutions amounted to almost US$22.5 billion, or 15% of total EMC revenues from privatization. The largest share of these revenues came from transactions in LAC, especially Mexico, which sold eighteen commercial banks. In EAP, the Philippines privatized seven banks for US$800 million. In Egypt, state-owned banks began divesting shares in joint venture banks as part of the government's strategy to withdraw from the banking sector.

3.5 Method of Sale

Direct sales were the predominant form of privatizations between 1988 and 1993 in EMCs. The direct sales of 1,853 firms represented more than 80% of all transactions in this time period and accounted for about 58% of the total revenues generated. Public offerings were the second most frequently used sales method and accounted for about 38% of the total privatization revenues even though they were only used in about 12% of all transactions. The other techniques lagged behind in both frequency and revenues they generated.

Figure 3.6
Privatizations by Method of Sale, 1988-1996



Source: World Bank, 1996.

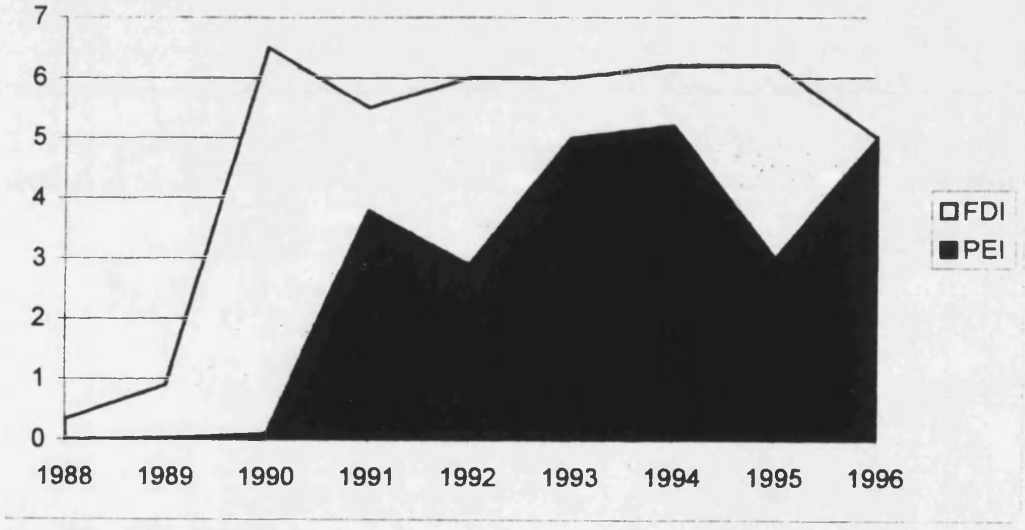
Sales methods have varied across regions for various reasons, including privatization strategy and market conditions. The most preferred method in EAP and SA, where stock markets are relatively developed, has been public offers. Between 1988-1993 approximately 60% and 90% of total privatization revenues in those regions respectively were generated through public offerings. In contrast, public offerings in SSA generated no more than 2% of the total revenues, due to the virtual absence of stock markets. Almost all transactions in the region were carried out through direct sales. LAC and EECA resorted primarily to direct sales as well, with 60% and 70% of total revenues, respectively, to attract management and technological transfers.

3.6 Foreign Participation in Privatization

Foreign investors can participate in privatization transactions either through foreign direct investment (FDI) or portfolio equity investment (PEI). Between 1988 and 1996, foreign investors were involved in a total of 760 transactions in EMCs,

generating a total of US$70 billion in sale, or 45% of the total revenue (from 9% in 1988 to 44% in 1996). FDI and PEI accounted for 62% (US$43 billion) and 38% (US$27 billion) of the overall foreign exchange earnings resulting from privatization. While the level of FDI participation in privatizations remained steady between 1988 and 1996, the driving force behind the increase in foreign participation was PEI; which grew at an explosive rate. It increased from around US$100 million in 1990 to US$5.6 billion in 1996; twice as much as in 1995 when equity issues plunged in the aftermath of the Mexican peso crisis.

Figure 3.7
Foreign Direct Investment (FDI) and Portfolio Equity Investment (PEI) in Privatization (US$ billions)



Source: World Bank, 1998

The heaviest foreign participation (50%) was in LAC followed by EECA (24%), and EAP (20%). SA, by contrast has an extremely low share of foreign investment participation (2.3%) because of the limitations placed on foreign participation in many countries of the region.

3.7 Summary

This chapter presents a comparative account of the growth and differentiation of EMC privatization. It presents various ownership privatization methods and discusses various measures and policies designed to bring SOEs into the private market.

The cross-country profile of the privatization record to date has focused on the regional, sectoral, methodological and foreign investment participation perspectives. The survey shows that EMC privatization has become widespread, accounting for 85% of worldwide privatization transactions between 1988 and 1993, and 35% of the total revenues from privatization. During this period, countries in Latin America and the Caribbean rank first in terms of magnitude of their privatization programs, followed by Eastern Europe and Central Asia. The most popular sector for privatization transactions has been the infrastructure sector, where most of the large-scale sales took place. The manufacturing sector is second. Direct sales dominate the spectrum of privatization methods used, accounting for 58% of the total value of the sales. Finally, foreign investment participation through FDI and PEI has contributed substantially to financing privatization projects in EMCs.

Chapter Four
Hypotheses

4.1 Introduction

Research on privatization has been dominated by investigations of the efficiency and socio-political explanations. This has occurred in part because these explanations tended to focus on wide-scale policy changes that were debated in many countries during the 1980s and 1990s. These debates continue today, and thus economic and socio-political explanations often take center stage for many researchers. What research there is on financial factors tends to be almost exclusively focused on budgetary explanations, with little or no empirical research on financial distress, although it has been mentioned in the more theoretical literature (Cook and Uchida 2001, Krugman 1988, Sachs 1984, Sachs 1986). Barnett (2000) goes the farthest in his study of the fiscal and macroeconomic impacts of privatization. He finds that privation proceeds are used to reduce domestic financing. However, his aim is to explain how privatization proceeds are used.

The connection between financial distress theory and privatization has not been fully explored. The central hypothesis of this dissertation centers on the observation that countries experiencing "financial distress," such as high budget deficits, large current account deficits, poor credit ratings, and *significant external debt* show a disproportionate tendency to privatize.

This chapter presents some background on debt (and other measures of country financial distress) and privatization in EMCs and discusses the foundations of the empirical predictions to be tested.

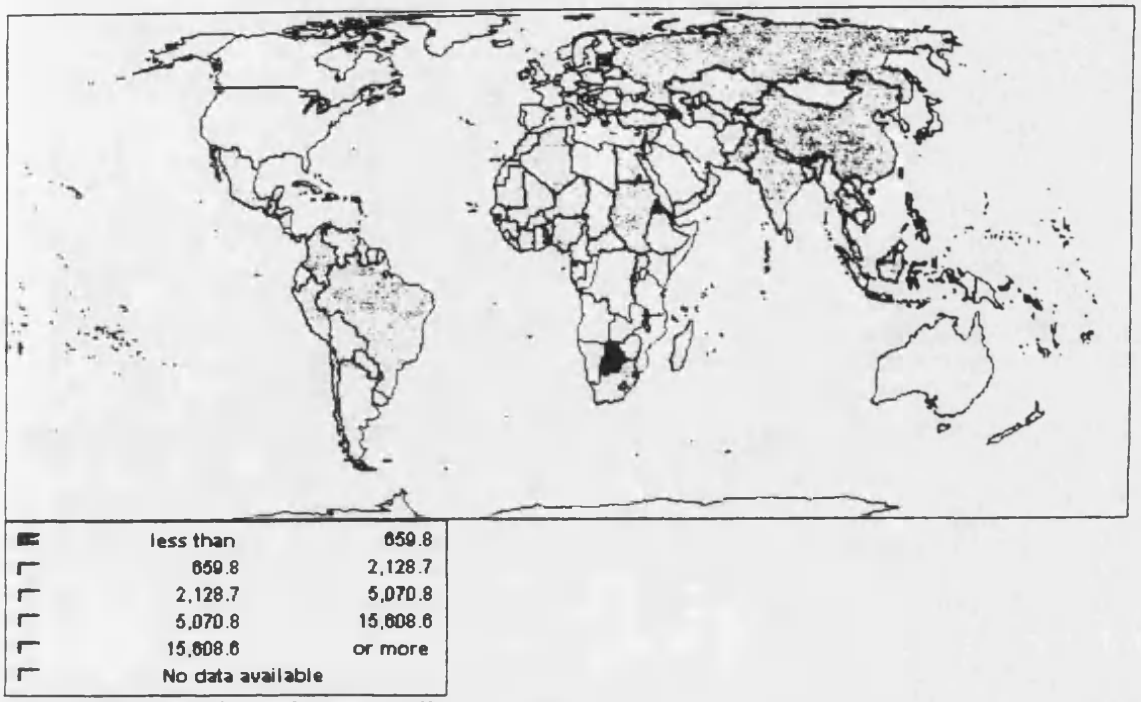
4.2 Hypotheses

A popular avenue for economic growth by EMCs has been through external borrowing. EMCs have borrowed in world markets to finance an excess of imports over exports. By importing capital goods, EMCs were able to supplement domestic savings.

A dramatic increase in debt occurred in almost every EMC during the 1980s, and continued in many countries through the 1990s (Figure 4.1 and Appendix C). Governments around the world found themselves in a debt trap. Unlike the Baker Plan of 1985, the Brady relief initiative in 1989 promised for the first time to grant debt and debt service relief to countries that followed market-oriented economic reforms to promote growth (Todaro 1989). Privatization of SOEs was one of the handful of core reform measures expected in exchange for debt relief. Nellis (1989) reported that mandatory privatization policies appeared in about 40% of the structural adjustment loan agreements signed by the World Bank between 1978 and 1988 and frequently became a condition for the release of payments to borrowing countries. This leads to the first hypothesis about the relationship between debt and privatization.

H1. As relative debt levels increase, more privatization transactions are undertaken.

Figure 4.1 Total Debt Stocks (US$ millions), 1997



World Bank, World Development Indicators, 1998.

The theoretical relationship between the level of pre-existing debt and privatization draws from the theory of the firm, particularly the concepts of *debt-overhang* and *financial stress* and their effect on investment decisions. Myers (1977) was the first to analyze the distorting effects that pre-existing debt is likely to have on managers' decisions regarding the level and type of investments. He showed that pre-existing debt in a private firm can reduce the incentives of managers to undertake new investments (causing sub-optimal investment behavior) out of fear that the gains would go entirely to the debt-holders. For governments, we expect investments to decline as debt increases.

H2. As relative debt levels increase, public sector investment declines.

To reduce debt levels, firms can either persuade creditors to write down their claims, or retire their debt by selling assets (Gilson 1997). However, it is often difficult to induce creditors to participate in a restructuring plan. Each creditor has an incentive not to forgive debt if he believes other creditors will make the concessions needed to return the firm to solvency.

Firms that face creditor intractability will have more difficulty in renegotiating their debt and will have to begin to liquidate their assets (Gertner and Scharfstein 1991). Gilson and Brown et al. (1994) show that distressed firms must sell assets to pay down debt, often under pressure from their bank lenders. In Gilson's study of financially distressed firms, 69% of the firms surveyed reported asset sales. As debt increases, we should see an increase in privatization as a means to finance their spending problems. Like firms, countries are induced to sell assets. One major indicator of financial stress is the current account situation. When countries have a negative current account, they have to increase their debt to pay for on-going expenses of the country. In most cases, the current account deficit is financing bad spending patterns or overconsumption (Dornbusch 2001). With a negative current account we expect to see a greater level of privatization.

H3. Current account deficits are correlated with more privatization activity.

Finally, the last two hypotheses are related to classic measures of financial distress—budget deficits and poor credit ratings.

H4. High, persistent central government budget deficits are correlated with higher privatization activity.

Cosset and Roy (1990) argue that countries with poor credit ratings are more indebted and are in a relatively poor state of financial health and are more likely to default.

H5. Lower country credit ratings are correlated with increased privatization.

Chapter Five
Data and Methodology

5.1 Introduction

This chapter presents the methodology used to test the hypotheses. It also discusses the data: how it was obtained, its features and characteristics, and the criteria applied for inclusion into the study. This chapter is divided into five parts. First, the underlying methodological philosophy is discussed. Second, the sample and data characteristics (descriptive statistics) are presented and explained. Third, the specific methodology used is presented. Fourth the variables for the estimation are listed and described. Finally, the model limitations are discussed.

5.2 Underlying Methodological Philosophy

The three philosophies most fundamental to the philosophy of research methodology are positivism, normativism, and pragmatism (Ethridge 2004). Positivism adheres to the view that only "factual" knowledge gained through observation, including measurement, is trustworthy. Positivism originated in the physical sciences and became influential in the social sciences during the mid-20th century and has maintained its importance to the current time. Positivism asserts that only phenomena that can be directly observed or measured are meaningful. Castle (1989) argues that theoretical concepts are valid only if the theory or its propositions can be quantified.

Normativism takes the position that knowledge of goodness and badness of conditions, situations, things and actions is valid and even necessary in order to produce prescriptive knowledge. Normativistic philosophy in social science research emphasizes matters on which people place value such as efficiency, welfare, income, standard of living, and quality of life (Gerring 2001). Normativism accepts that objective value knowledge is sometimes essential for statements or prescriptions about what should be done to accomplish specified goals or objectives. For example, "the world is better off if governments can be made to operate more efficiently." Privatization as a public policy tool must use normative value judgments and be concerned with values.

Pragmatism is a philosophy that holds that what is important with respect to descriptive knowledge is how well it works for the problem at hand (King, Keohane and Verba 1994). Pragmatists evaluate concepts for their usefulness in solving problems rather than for their own sake. In other words, pragmatists are interested in applying concepts to solve problems. The selection of methodology is based primarily on the ability of that methodology to solve the problem at hand.

This dissertation utilizes both positivism and pragmatism as its guiding research philosophies. Part of the value of this study, unlike the great majority of privatization research to date, is the fact that it is *not normative* in nature. Most privatization research has been conducted to support or justify policy decisions.

Positivism in particular has fostered the importance and development of measurement and quantification—the use of data to test the validity of theories and derive expected magnitudes of effects. The interest in measurement as well as the increasing availability of data in the 20th century fostered the development of statistical methods, especially the branch of statistics known as sampling. The integration of social science theory and mathematics led to the development of econometrics (Ethridge 2004). Econometrics includes empirical data and measurements, making it both positivistic and pragmatic. The general process of research closely associated with these two philosophies is called the "scientific approach." It is generally accepted in social science research that the logic of scientific inference provides the most robust generalized methodological approach (King, Keohane and Verba 1994).

5.2.1 The Scientific Method and Statistical Econometrics

The scientific approach, which is employed in this study, can be characterized as having the following general steps: 1) identify the problem/issue/question; 2) define the research objectives; 3) develop approaches for achieving objectives (which may include testing of hypotheses of expected outcomes and/or alternative solutions); 4) conduct the analysis (obtain appropriate information and evaluate it, which may include testing of hypotheses); and 5) interpret the results and draw conclusions, including providing prescriptions, if appropriate.

Moreover, the scientific approach consists of ongoing interfacing of deduction and induction. Induction is an empirical process of arriving at new generalities from

observed realities (facts, data, observations) and does not depend of previous knowledge (Ethridge 2004). While the process of arriving at hypotheses is largely deductive, the testing of hypotheses, statistical or otherwise, is large inductive. Statistical induction is one of the most prevalent research approaches in the social sciences, especially economics (Wooldridge 2000). Statistical induction is the process of testing whether estimates of parameters are different from some specified quantity or whether estimates of relationships explain a statistically significant proportion of the variation in variables.

The objective of induction is to show the outcome is derived from available evidence that has been generated or obtained from reliable information. Even when the focus is on developing theory, a deductive process, theory must eventually be evaluated for applicability or validity through empirical testing, an inductive process.

Deduction (theory alone) is insufficient in studying real world phenomena because it lacks the definitive means of evaluating whether the premises (assumptions) of the ideal types match the situation being analyzed (King, Keohane and Verba 1994). Induction alone (observing, empirical testing) is insufficient because there is always the probability of error (Ladd, 1987). Scientific inquiry must rely on the use of both deduction and induction in a constant interaction with one another with the methodological framework of the scientific approach.

Using the scientific approach, the goal is to collect a substantial quantity of relevant evidence and apply analytical techniques to the data. The intent is not to gain significant

knowledge about specific cases or specific categories (beyond what is necessary to code variables), but to cast a wide net and to avoid any restrictions in scope. A variable-oriented study such as this one begins by specifying the hypothesis to be tested and then delineating the widest population of relevant observations. The wider the population, the better (Ragin 1987). Not only does a wide population provide a basis for a more exacting test, but it also gives the investigator the opportunity to demonstrate the breadth of an argument.

Statistical analysis using econometrics is one of the leading methods of empirical investigation in social science (Gerring 2001). Its methodology is well documented and widely understood. It is one of the most robust research methodologies in social science. Therefore it is particularly useful for the purpose of researchers to replicate and extend the findings of this study.

The econometric modeling approach also lends itself to analyzing the large amount of data. The researcher was fortunate to have access to ample and applicable data for over a ten-year study period through sources including the World Bank, the IMF, the IDB, and other multilateral agencies. Without the quantity and quality of the data, different research methods may have been used.

Econometric models are not without their limitations. In order to model phenomena, it is often necessary to simplify and abstract independent and dependent variables. Sometimes this abstraction can lead to oversimplification and/or a reduction in accuracy.

Another limitation, overspecification, is caused when too many independent variables are added. The addition of more independent variables cannot decrease the R squared, in most cases, will at least marginally increase the R squared (Bertsimas and Freund 2000). Thus the model should be kept as simple as possible, which again, can lead to oversimplification (Wooldridge 2000). Another pitfall is the problem of multicollinearity. This occurs when two independent variables are highly correlated, leading to erroneous correlation. Fortunately there are simple tests to this problem that are utilized in this study.

Another limitation is that the data need to be uniform and complete. This is not always possible when dealing with real world phenomena. This means a number of data need to be edited out or simplified, thereby further abstracting the model.

5.2.2 Limitations of Comparative Analysis and Case Studies, Direct Surveys and Optimization Models

The comparative analysis approach is useful in many circumstances, especially where the number of relevant observations decreases (Smelser 1976). Comparative method is essentially a case-oriented strategy with the focus on comparing cases, and cases are examined as wholes—as combinations of characteristics (Ragin 1987). The comparison of two to four cases is considered the limit for most research. As the number of cases and the number of relevant causal conditions increase, the case approach becomes more and more difficult to use. Case studies often focus on a single case and so they lack a sufficient number of N. Case studies rely on within-case variation in order to develop larger causal relationships (Gerring 2001). This can often result in problems with lack of

generalizable results, lack of replicability and autocorrelation. These problems severely limit the robustness of this method. The case study method is often used when the number of relevant observations is too small to allow the investigator to establish statistical control over the conditions and causes of variation. For the purpose of this study, abundant and high quality data were available.

Case studies are often justified on the basis of the particular case or cases as being "representative" of the research objective. How does the researcher determine which case or cases is representative? There are no concrete or methods for doing this (Gerring 2001). For example, economic and political science work in general has focused on the United States. More studies have been devoted to individual American Cities and States, than can be found on many countries around the world. If all countries were like the United States, this bias would not be problematic, but this is not the case.

The direct survey method was not used in part because much of the data was already available and did not have to be gathered. Moreover, surveys can suffer from interviewer or question biases, sampling biases, and often contain an insufficient quantity of data.

Another popular avenue of research has been through pure mathematical modeling and optimization. The research has often focused on economic efficiency. This approach is limited by the fact that the models have to be overly simplified to the point of being unrealistically abstract. Moreover, there have been very few clear-cut results on economic efficiency optimization. Quantitative modeling in this manner can lead to less

accuracy if the quantitative variables and values do not relate closely to the concepts or events that they are designed to measure and can lead to serious measurement error and problems with causal inference.

5.3 Sample and Data Characteristics

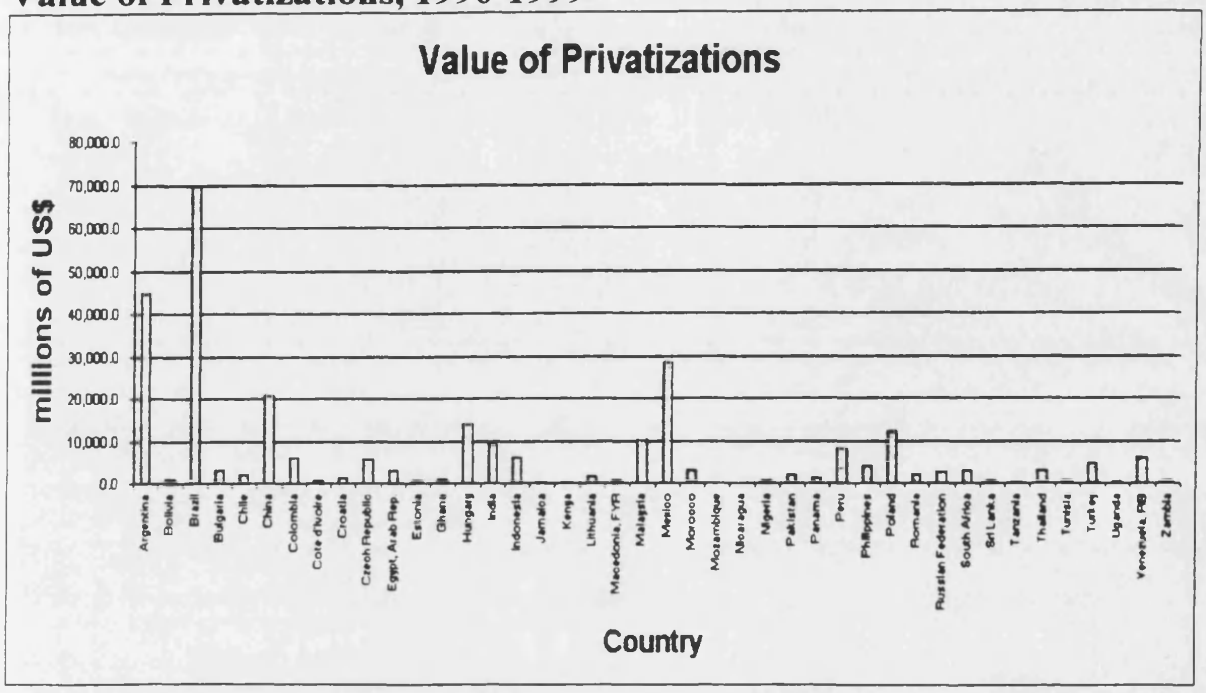
The following characteristics of the sample and data need to be considered. First, the results are based on a select sample of countries for a certain period of privatization for which data are available. This data does not represent the complete universe of EMC privatization activity, but a particularly informative period of privatization. The decade of the 1990s was chosen because it is the first complete 10-year period for which a significant amount of EMC privatization data has become available (Boubakri and Cosset 2000). Djankov and Murrell (2000) cite the 1990s as the period of greatest privatization, with more than 150,000 SOEs in EMCs undergoing some form of privatization or restructuring. This decade also captures both the rapid increase in the early 1990s, and stabilization of privatization activity in the mid-to-late 1990s in many EMCs (Small 2001, and World Bank 2002). The analysis could not extend farther back in time because the discontinuity of some of the data series used. Privatization for many EMCs switched into high gear during the 1990s. Moreover, this period provides the best ten-year period to yield the greatest number of sample observations of EMCs (World Bank 2002).

The raw data is derived from the World Bank (Global Development Finance Database 1999, World Bank Debt Tables 2002, World Bank Privatization Database 2001, and World Development Indicators 2001), Organization for Economic Cooperation and

Development, and the International Finance Corporation (Emerging Markets Database 2000). The initial sample of 125 EMCs was obtained from the World Bank "Classification of Economies" (2002). The World Bank classifies economies by gross national income (GNI) per capita. Based on their GNI category, economies must then be classified as low to middle income to be considered EMCs. This group was disaggregated for those EMC that had experienced privatization over the 10-year period equal to or greater than 5% of the country's GNI. This level is generally considered to be the threshold for significant privatization activity (Dornbusch 2000). Privatization was aggregated and measured by revenue proceeds for each country. The sample size was then reduced to 65 countries. The final data sample consists of 42 countries EMCs.

The sample exhibits considerable randomness and diversity of privatization revenues, sectors privatized, country GNI, and timing of privatization activity and geographic distribution. Figure 5.2 below illustrates the 42 countries and the diversity of privatization revenues over the ten-year period.

Figure 5.1
Value of Privatizations, 1990-1999



Source: World Bank Privatization Database, 2001.

It is important to bear in mind that the aggregate privatization revenues numbers are comprised of hundreds of thousands of individual privatization transactions across different industries and sectors of individual countries. Table 5.3 below provides a sample of the types of companies and industries of China in 1997. The complete dataset for privatizations transactions for all countries over the entire 10-year period is included in Appendix D.

Table 5.1
Sample of Privatization Transactions in China, 1997

YEAR	COUNTRY	COMPANY	SECTOR	SALE AMOUNT*
1997	China	Nanjing Posts and Telecommunications Equip.	Electronics	31.4
1997	China	Zhejiang Expressway	Transportation	439.0
1997	China	Aviation Industries of China	Aviation	144.0
1997	China	Catic Shenzhen	Manufacturing	49.2
1997	China	Jiangxi Copper	Metallurgy (copper)	207.0
1997	China	Shandong Chenming Paper Industrial	Paper	66.0
1997	China	Tianjin Zhong Xin Pharmaceutical Group Corporation ltd.	Pharmaceuticals	67.0
1997	China	Shanghai Zhenhua Port Machinery	Port machinery	41.4
1997	China	Heilongjiang Electric Power	Power	67.0
1997	China	Beijing Datang Power Generation Company	Power	404.5
1997	China	Beijing North Star Company Ltd	Real estate	209.0
1997	China	Tianjin Development Holdings Ltd.	Retail	153.6

*Millions of US$
Source: World Bank Privatization Database, 2001.

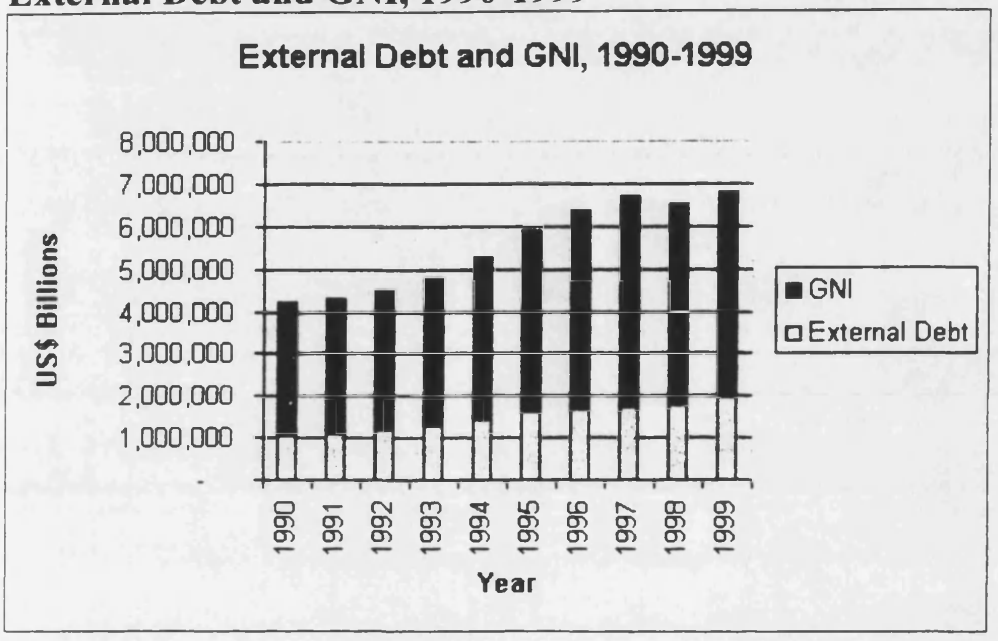
In the first six months of 1997 alone, China privatized SOEs in electronics, transportation, aviation, manufacturing, paper, pharmaceuticals, power generation, real estate, metallurgy, and retail. Most of the privatization reflected a cross-section of the SOEs viable for privatization in a particular economy, with no particular bias or overrepresentation of industry sectors or types of companies.

The data used for privatization consists of all the partial or complete sales of public companies made by governments to the private sector. Privatization data was collected by the World Bank (World Bank 2000, 2001). Data for public external debt and related variables are also annually published by the World Bank (see Appendix B for the data sources). The specific values for each individual country are listed in Appendices C and

D. The tables in Appendix D show total assets privatized in each country of the sample and the corresponding receipts in U.S. dollars.

The combined, aggregate values of debt for all countries are listed in Figure 5.3 below. Nearly all countries showed strong debt growth rates from 1990 to 1999.

Figure 5.2
External Debt and GNI, 1990-1999



Source: World Bank Debt Tables, 2001.

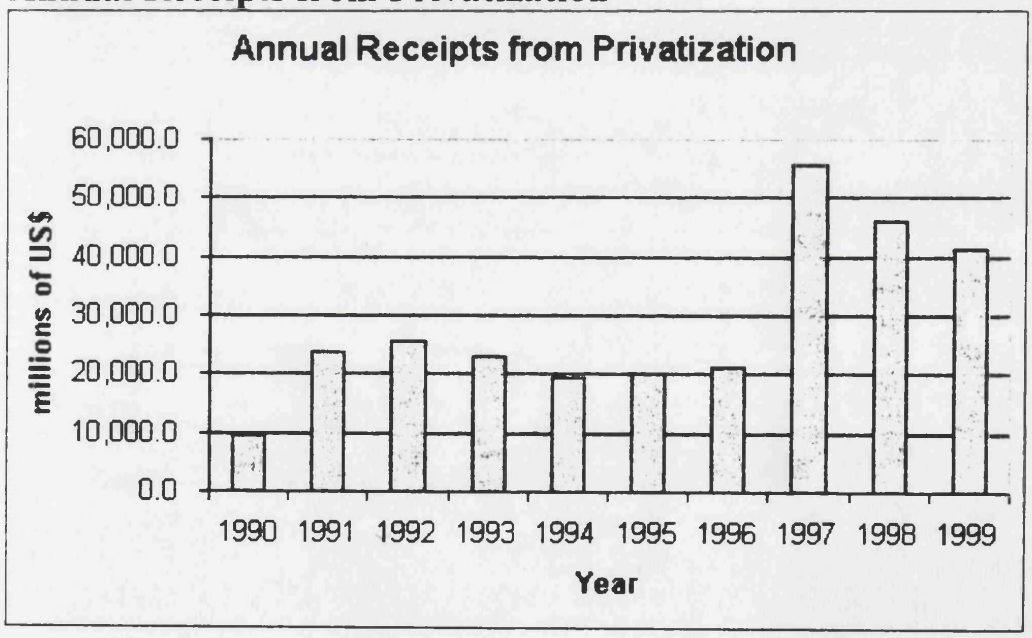
As can be seen from Figure 5.3, for most countries, it is important to note debt is a significant proportion of the GNI (gross national income). Significantly, the amount of debt in the study countries nearly doubled between 1990 and 1999, from $1 trillion to $2 trillion.

Figure 5.4 below tracks privatization proceeds from every year from 1990 to 1999. For six of the nine years, the rate of privatization increased. The 1990s were a time of active

and increasing privatization for most EMC countries. There are also major differences among privatizing countries in terms of absolute values of privatization. Though privatization proceeds of some countries may be relatively low, the total of privatization proceeds over the 10-year period was still significant for the specific country.

Figure 5.4 illustrates the privatization activity over this period. Privatization revenues increased in the early 1990s, declined in 1993, stabilized in 1995 with a slight increase in 1996, and then rapidly increased in 1997, coinciding with the world financial crisis. In 1997 EMCs around the world faced conditions of dramatically increased financial distress, large debts, deteriorating macroeconomic conditions, and insufficient sources of revenue.

Figure 5.3
Annual Receipts from Privatization



Source: World Bank Privatization Database, 2001.

The types of companies being privatized did not change significantly from the early 1990s, and included a wide range of SOEs. This is an important aspect of the data because many countries started their privatization processes in the 1980s, but concluded some of their main transactions several years later. Moreover, some countries, especially because of the Asian financial crisis of 1997, stepped up their privatization efforts. The specific privatization proceeds values for each country are listed in Appendix D.

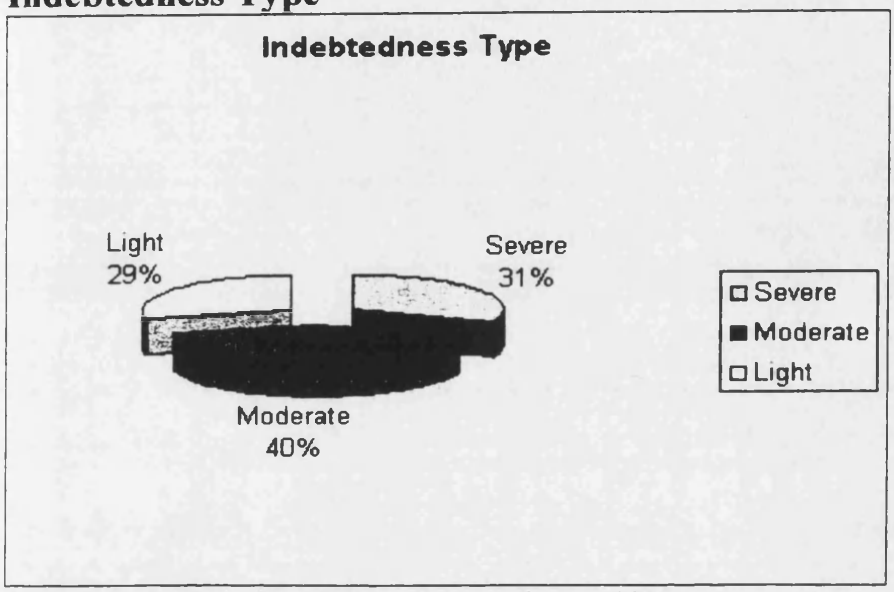
5.3.1 Debt

Debt is comprised of long-term and short-term components. Long-term debt is defined as debt that has an original or extended maturity of more than one year. Long-term debt has three components. There is public debt, which is an external obligation of a public debtor, including the national government, a political subdivision, or autonomous public bodies. There is publicly guaranteed debt, which is an external obligation of a private debtor that is guaranteed for repayment by a public entity. There is private nonguaranteed debt, which is an external obligation of a private debtor that is not guaranteed for repayment by a public entity (World Bank 2002). Short-term debt includes the following: interest in arrears on long-term debt, and short-term, officially guaranteed suppliers' credit.

As mentioned previously, "indebtedness" is further subdivided by the World Bank into severe, moderate and light indebtedness as shown in Figure 5.5. The study countries range in their characterization of indebtedness from "slight" to "severe." The majority of

the countries are characterized by the World Bank as either lightly or moderately indebted.

Figure 5.4
Indebtedness Type



Source: World Bank, World Development Indicators, 2000.

5.4 Methodology

Both cross-sectional and time-series data are used. Cross-sectional data consists of data collected from a population at a given point in time, where minor time differences in collecting the data are ignored. Time-series data are constructed from repeated cross-sections over the 10-year period. Unlike cross-sectional data, the chronological ordering of observations in a time-series conveys potentially important information such as trends and changes over time. The time period between 1990 and 1999 was selected because it was a period of extensive privatization activity in EMCs. The year 1990 was also selected as the base year because it marked the return to more normal global economic conditions after an abrupt recession caused by the crash of many world equities markets in the late 1980s. Appendix D provides the cleaned and summarized data for the bulk of

the analysis. Each data table is individually labeled as to its content and time period. Both cross-sectional and time-series tables are included in this Appendix.

5.5 Estimation Techniques

Three estimation techniques are used to analyze the data: ordinary least squares (OLS), time-series data analysis, and summary statistical analysis. The fixed effects (FE) model was is because it controls for systematic differences in the mean levels of regions and years. The assumptions and main specifications of these models and approaches are discussed below.

The linear regression model takes the following form:

$$Y_i = \beta_0 + X_{i\beta} + \varepsilon_i \qquad i = 1, \ldots n$$

Where ε is a normally distributed random variable with mean $\mu = 0$, a standard deviation σ, is homoscedastic, and with no autocorrelation.

5.5.1 Estimation Assumptions

It is useful to explain the use of fixed effects (FE) and random effects (RE) specifications. These two models are usually used when the number of cross-sectional units is large and the number of time periods over which those units are observed is small. Both effects use dummy variables in the context of time-series data. They try to account for the impact of certain variables left out of the model that either affect each cross-section to a different degree or are unique to each unit. The question is, which model should be used?

If the data exhaust the population, then the FE approach that produces results conditional on the units in the data set, is a better model to use. The FE model might be viewed as applying only to the cross-sectional units of the study, and not to additional ones outside the sample.

On the other hand, if the data represents a sample of observations from a large population with the intention of making inferences regarding other members of the population, then the RE model has advantages over the FE model because it saves degrees of freedom. This would be appropriate if the sampled cross-sectional units were drawn from a large population. In this study, however, the sample population is exhausted. In addition, the random effects model has a major drawback as it assumes that the random error associated with each cross-section unit is uncorrelated with the other regressors—which is not always the case. The random effects treatment may therefore suffer from inconsistency due to omitted variables.

5.5.2 Multiple Regression Estimation Technique

While analyzing the relationship of debt and privatization, there are other factors that will be taken into account to ascertain their effects on privatization as well. Multiple regression allows many observed factors to affect y. The general multiple linear regression model can be written as:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \ldots + \beta_k x_k + \varepsilon$$

where β_0 is the intercept, β_1 is the parameter associated with x_1, β_2 is the parameter associated with x_2 and so on. There are k independent variables and ε is the normally distributed variable with $\mu=0$ and some standard deviation σ.

The method of ordinary least squares (OLS) chooses the estimates to minimize the sum of the residuals. That is, given n observations on y, x1, and x2, the estimates $\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3$ are chosen simultaneously to make as small as possible.

$$\sum_{i=1}^{n} (yi - \beta_0 - \beta_1 x_{i1} - \beta_2 x_{i2})^2$$

The terminology for multiple regression is given in the table below.

Y	$X_1, X_2, \ldots, X_K$
Dependent Variable	Independent Variables
Explained Variable	Explanatory Variables
Response Variable	Control Variables
Predicted Variable	Predictor Variables
Regressand	Regressors

Source: Wooldridge, 2000.

Given the large number of independent variables, there are potential problems with multicollinearity and over-specification. This also raises the problem of which subset of possible independent variables should be chosen to arrive at the "best" model. The method used to address these problems was stepwise regression, subject to the below relationship (Wooldridge 1999).

$$n \geq 5(k + 2)$$

Where

n is the number of data observations, and k is the number of explanatory variables.

5.6 Variables

The variables (or their proxies) for the dependent and independent variables used in the empirical analysis are presented and explained below.

Privatization (PRIV) is the dependent variable in the empirical estimation. It is measured as the total amount in millions of U.S. dollars of privatization revenues per year. This includes all of the partial or complete sales of public companies made by governments to the private sector. It also includes the contracting of government services through concession or licensing agreements. Excluded are transactions that do not generate a cash flow, such as voucher privatization.

This variable exhibits only non-negative values; zeros when there are no transactions, and positive figures (i.e., the value of assets sold) in the case of transactions. Several countries began to privatize at or before the beginning of the study time frame (1990), while others began later. Some countries have uninterrupted processes whereas others have experienced as much as several years without privatization activity.

In an ideal estimation, privatization levels should reflect the public sector's proportion of the assets being privatized. Then it would be possible to control for public sector size and be able to know the maximum amount that each country could potentially privatize. This is important because the country debt might keep growing but privatization might not continue (i.e., there is a finite amount which can be privatized). In the most extreme

case, the maximum amount of the privatizable assets would precisely be the size of the public sector.

To capture the finite amount of assets that can be privatized, one needs a measure of the government's market value of assets. However, this information does not exist. Nor is there systematic information about the number of public sector workers which could be used a proxy for government size. Instead, three alternative variables have been used to weigh privatization levels in each country: gross national income (GNI), government share of GNI, and the value of exports of goods and services. They do not measure the size of the public sector and since their values can swing up or down, the relative amounts privatized maybe inflated (or deflated) depending on the economic performance of each country in the years of privatization. Nonetheless, of these three normalizing variables, the government share of GNI is expected to be the most accurately correlated with the size of government assets.

Different explanatory variables are systematically added to each equation to check the robustness of the estimate on privatization, assess whether overall estimates are sensible, and mitigate against specification problems due to omitted variables. Finally the equations are run using different combinations of samples, which, provides another robustness check.

The independent variables used in the estimation are as follows.

1. External Debt Level (DEBT). The estimation uses the level of external debt with the purpose of finding the most suitable definition of debt to test the debt-privatization relationship. Total external debt is the sum of public, publicly guaranteed, and private non-guaranteed long-term debt, use of IMF credit, and short-term debt (World Bank 2000) (see glossary for further explanation). External debt seems to be the most inclusive and most generally acknowledged form of debt for measuring non-domestic indebtedness. To weight the debt variable, debt is regressed with GNI (Gross National Income).

2. GNI (GNI). Gross national income is used to weight the privatization and debt values by country. GNI, like debt, grew considerably for almost all of the countries in the study over the 10-year period, with a slight to moderate decline for several Asian countries after 1997. For operational and analytical purposes, the World Bank's main criterion for classifying economies is GNI (World Bank 2002). It measures the value of output produced within the economy. This is derived by adding the combined value of personal consumption expenditures, gross private domestic investment, government purchases of goods and services, and net exports of goods and services (Begg, Fischer, and Dornbusch 1994).

3. Current Account Deficit (CA). This measures several important attributes of a country's economy. In the first instance, the current account measures the trade balance of goods and services with the rest of the world. When a

country imports goods and services from the rest of the world, it makes payments to foreigners (a current account deficit). When a country exports goods and services to the rest of the world, it receives payments from foreigners (a CA surplus). The current account includes the balance of exports minus imports, but also interest paid to and received from the rest of the world.

The CA is important for two reasons. First, it is an indicator of the relative importance of its integration (or lack of) into the global economy. Second, it is an indicator of financial stress. For example, when a government cannot cover its spending with taxes or exports (CA surplus), then it is forced to borrow to cover its expenses. Countries with a positive current account balance are more likely to service debt (Cossett and Roy 1991). Borrowing to finance debt or interest on the debt is particularly onerous because if the borrowing does not go towards productive, profitable investments, and only to finance its bad spending habits or over-consumption, then the borrowing could lead to more debt and financial distress (Dornbusch 2001).

4. Central Government Fiscal Deficit (DEFIC). The fiscal deficit variable measures the government's domestic financial situation. The budget deficit is the excess of government outlays over government receipts. When the government is running a deficit, it is spending more than it is taking in. A government finances deficits mainly by borrowing from the public through

selling bonds. As a result of this borrowing, the government builds up its debt to the public (Begg, Fischer, Dornbusch 1994). Persistent deficits reflect a struggle by the government to obtain domestic resources.

5. Credit Rating (CRED). This in an index of international country credit ratings developed by *Euromoney* (1987). *Euromoney* is a leading international financial services publication. Country risk has become a topic of major concern for the international lending community. A country risk rating is an indicator of the likelihood that a sovereign borrower will default on its debts. The rating is a weighted average of two indicators: 1) market indicators, covering access to bond markets, selldown performance (a measure of oversubscription or otherwise of an issue) and access to trade finance; and 2) credit indicators, incorporating payment record and rescheduling difficulties, analytical indicators, including political risk, economic indicators and economic forecasts. These ratings combine both the market's perceptions of country risk (access to markets and selldown performance) with some objective factors (payment records and economic indicators). These ratings are important because a systematic relationship between lenders' country risk assessments and credit pricing has been established. Countries with high credit scores have been shown to be less indebted (Cosset and Roy 1991).

6. Investment (INVEST). This variable measures the level of government investment through "fixed capital formation." This reflects all country-level

investments made in the country. There is no reliable set of data that reports government investment over this period for the study countries. Fixed capital formation is the best proxy for EMCs where the government does most of the large capital investment.

7. Income Level (INC). This variable distinguishes between low versus middle and high-income countries. According to the World Bank classification, the low-income countries include Mozambique and Nicaragua, and middle and upper income countries would include Malaysia and South Africa. The variable takes a value of 1 for low-income countries and zero for middle and high-income countries. All 42 study countries are listed by income group in Appendix B.

8. Indebtedness Level (Ddclass). This variable captures an important component of financial stress by measuring the degree to which countries are indebted, defined by the World Bank's Heavily Indebted Poor Country (HIPC) initiative (World Bank 2001). External indebtedness is defined as a percentage of GNI, exports, government revenue, and total debt. Severely or moderately indebted countries are coded "1," and less indebted countries are coded "0." The World Bank classifies countries with a present value of debt service greater than 220 percent of exports or 80 percent of GNI as "severely indebted." Countries that were not severely indebted but whose present value of debt service exceeded 132 percent of exports or 48 percent of GNI were classified

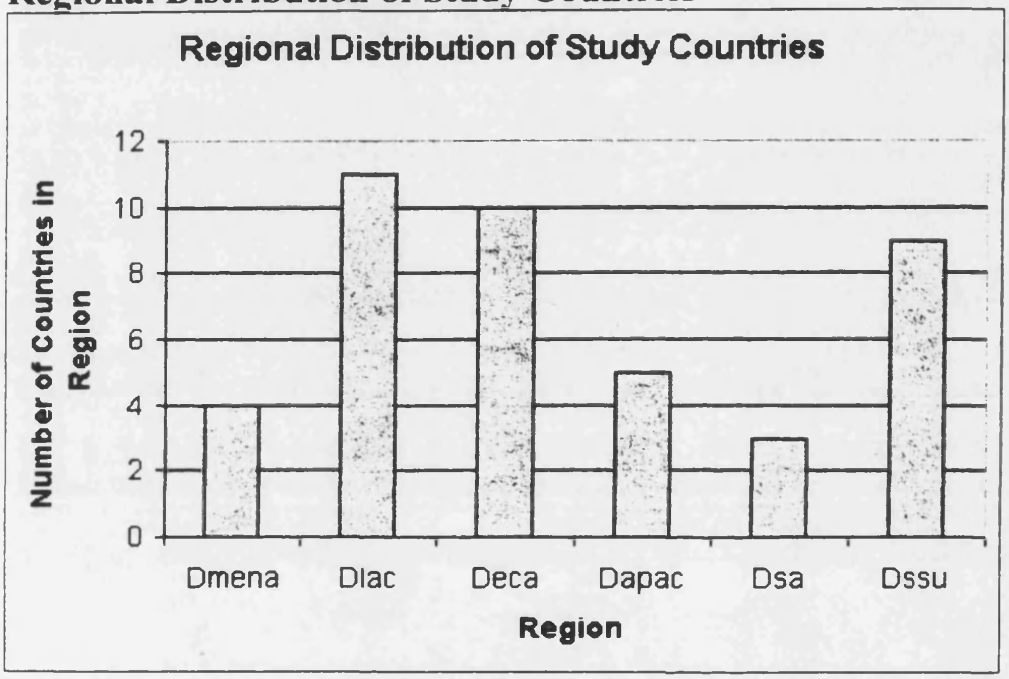
as "moderately indebted." Countries that did not fall into these two groups were classified as "less indebted." Appendix B provides a complete listing for the 42 sample countries.

9. Stock Market Capitalization Level (Dmcap). This variable codes countries with stock market capitalization greater than $50 billion as "1," and "0" otherwise. Several studies indicate the importance of having a large and active stock market in privatization (Agtmael 1993, Boubakri and Cossett 2000, Kim and Sinal 1993). Stock markets can help facilitate the sale of shares of privatizing companies, and are often a more efficient mechanism to privatize companies to attract domestic and foreign investors (Kim and Sinal 1993). The larger the stock market as measured by capitalization, the more efficiently the shares of privatizing companies can be sold. Stock markets can lower the cost of capital by making the investments more liquid.

10. Regional Dummy Variables (DMENA, DLAC, DECA, DAPAC, DSA, DSSU). These dummies capture important regional differences in privatization and the independent variables above. The distribution of the various countries in each region is shown below in Figure 5.1. The countries of the sample are distributed among the six regions of the world as defined by the World Bank. DMENA stands for Middle East, North Africa. DLAC stands for Latin America and the Caribbean. DECA stands for Europe and Central Asia. DAPAC stands for Asia Pacific. DSA stands for south Asia. DSSU stands for Sub-Saharan Africa. Regional identification is useful

because patterns among country groupings can be ascertained and tracked. There are important economic, historical, institutional and cultural differences among regions. If the same trends can be empirically observed across different regions, then the results will be all the more robust.

Figure 5.5
Regional Distribution of Study Countries



Dmena= Middle East and North Africa; Dlac= Latin America and the Caribbean; Deca= Europe and Central Asia; Dapac= Asia Pacific; Dsa= South Asia; Dssu= Sub-Saharan Africa.

There is a good distribution of all countries in the sample with the LAC, ECA and SSU regions having the highest representation with 10 or more countries. South Asia and the Middle East have the fewest numbers of countries.

5.7 Multicollinearity Checks

5.7.1 Cross-Sectional Variables

Overall, there appear to be few problems with multicollinearity as evidenced by the correlation matrix. The exception is the high correlation of GNI with Debt.

Table 5.2
Correlation Matrix for Cross-Sectional Variables

	DEBT	GNI	CA	CRED	DDCLASS	DMCAP
DEBT	1					
GNI	0.830811	1				
CA	0.64556	0.543143	1			
CRED	0.290271	0.337547	0.26605	1		
Ddclass	-0.02211	-0.25728	-0.13537	-0.30428	1	
Dmcap	0.579764	0.630936	0.411995	0.491463	-0.14142	1

While the correlation is high at 0.830, it is expected and, as seen later, it is the highest among all independent variables. It makes sense that the larger the economy, the greater the debt. This correlation does not seem to present a problem.

5.7.2 Time-Series Variables

The time-series correlations reveal no serious problems with multicollinearity, with the only exception being GNI and Debt, as expected.

Table 5.3
Correlation Matrix for Time-Series Variables

	PRIV	CA	DEBT	GNI	INVEST
PRIV	1				
CA	-0.38344	1			
DEBT	0.489278	-0.24615	1		
GNI	0.465529	-0.06612	0.819439	1	
INVEST	0.061059	-0.07222	0.100335	0.221039	1

5.8 Descriptive Statistics

This section provides summary statistics on the data and variables.

The mean, standard error, median, standard deviation, minimum and maximum characteristics of privatization and debt are given below in Table 5.4. Statistics for investment are not given, as these data from the World Bank are reported as index numbers, not actual dollar values. The data measure the amount by dollar volume (US$ millions) and as a percentage of GNI.

Table 5.4
Privatization and Debt, All Countries

	MEAN	SD	MIN.	MAX.
PROCEEDS FROM PRIVATIZATION, 90-99	6,801.45	13,050.30	130.3	69,607.70
PRIVATIZATION FIRST FIVE YR. TOTAL 90-94	2,411.32	4,771.99	0	21,705.40
PRIVATIZATION SECOND FIVE YR. TOTAL 95-99	4,390.13	9,917.90	0	60,805.50
TOTAL EXTERNAL DEBT, 1999	46,313.45	59,205.44	1,433.00	244,673.00
DEBT AS A % OF GNI, 1999	7.42	3.79	1.9	16.1

*Amounts in US$ millions

Mean privatization proceeds during the decade were $6.8 billion, with a standard deviation of $13 billion, showing again the great variation of privatization among countries. The second half of the 1990s shows nearly a doubling of the mean privatization amount, from $2.4 billion to $4.3 billion. The average external debt in 1999 was $46.3 billion, with a maximum of $244.6 billion and a standard deviation of $59 billion, again exhibiting wide variation. Debt as a percentage of GNI averaged at 7.42%.

The most indebted country as a percentage of GNI in 1999 was Argentina, at 16.1%. For detailed debt information on specific countries, see Appendix D.

5.8.1 GNI and CA, Early and Late 1990s

EMCs were quite dynamic during the 1990s, many of them expanding, but also incurring large current account deficits.

Table 5.5
Descriptive Statistics, GNI and CA, Early and Late 90s

		MEAN	SD
GNI	Lower	75,940.30	152,385.21
	Higher	150,449.73	170,058.44
	Early 90s	85,529.22	129,336.75
	Late 90s	111,997.67	186,518.66
CA	Higher	(481.66)	4,233.29
	Upper	(2,307.74)	6,204.14
	Early 90s	(708.50)	2,612.69
	Late 90s	(1,362.61)	6,470.62

*Amounts in US$ millions

Current account deficits were also much higher in the second half of the 1990s—worsening from $708 million to $1.36 billion. There was significant variation in GNI among the study countries as indicated by the standard deviation of $129 billion. All this emphasizes that privatization was quite a dynamic process during the 1990s.

There were also significant differences between lower-income and higher-income countries in terms of GNI, current account, credit rating, and national deficits.

Higher income countries had a mean GNI of more than twice that of their lower-income counterparts. Current account deficits were significantly higher, at $2.3 billion, for higher income countries.

5.8.2 Credit and Deficit (Lower and Higher-Income Countries)

Credit figures are Euromoney's country risk credit rating values. Euromoney's score is a weighted average of market indicators, credit indicators, and analytical indicators. The scores range from a low of 26.3 for Zambia to a high of 65 for Chile. As expected, lower-income countries have a significantly lower credit rating, with a mean of 42.0, versus 57.26 for higher-income countries.

Table 5.6
Descriptive Statistics, CRED and DEFIC, Lower and Higher-Income Countries

		MEAN	SD
CRED	Lower Inc.	42.07	10.42
	Higher Inc.	57.26	6.67
DEFIC	Lower Inc.	(1.89)	2.25
	Higher Inc.	(3.21)	3.08

*Deficit as a % of GNI

Deficit figures are a percent of GNI. The mean current account deficit is $1.89 billion. Interestingly, lower income countries have a lower mean deficit (-1.89) than higher income countries (-3.21 of GNI).

5.9 Model Limitations

The following are three important qualifications that affect the estimation of the model.

Timing of Privatization. The most appropriate time frame to test the relationship between debt and privatization is when all countries have finished with their privatization efforts. The fact that some countries in the sample have not concluded privatization plans, while others are at their peak of the privatization activities, leads to some bias of the estimation. The extent of this bias depends, in part, on the future predictions on the debt trend and the lag of its effect on privatization. For example, if the debt levels do not keep increasing where privatization does, then the coefficients are likely to be underestimated. Given the same size and diversity, the timing bias should not be a significant factor as all phases of privatization activity are captured.

Timing of the Effect of Debt. The underlying assumption in the estimation is that the amount of privatization has been affected by recent debt levels and other problems related to financial stress, and not because some governments might want to start privatization as a way of *preventing* future financial difficulties. The history of debt crises around the world supports this assumption. The dire predicaments in the early 1980s (external financial crises and shortage of external funds) in most EMCs (Begg, Fischer, and Dornbusch 1994) led directly to the events of the late 1980s and early 1990s, such as the renegotiation of debt payments, special loans from commercial creditors and international organizations, and privatization (Kikeri et al. 1992).

Effect of Foreign Revenues. The direct and indirect foreign revenues generated by privatization have allowed some countries to reduce foreign loans and/or pay back part of their external obligations. In such cases, there is reverse causality between debt and privatization. To avoid this complication in the estimation, the debt lags are made long enough to avoid the periods when this simultaneous effect might have occurred.

Chapter Six
Empirical Tests and Results

6.1 Introduction

This chapter is divided into four parts. The first part discusses the general model specification. The second part presents and discusses the results of the cross-sectional relationship between financial distress factors and privatization. The third part presents and discusses the time-series study of the relationship between privatization and debt (and other financial distress factors) from 1990 to 1999. This section discusses the findings and delves into some of the underlying causes for the results. The fourth section summarizes the results.

It is worth restating the main hypotheses for the empirical inquiry. During the course of the discussion, additional questions related to each of the hypotheses are posed and discussed.

H1. As relative debt levels increase, more privatization transactions are undertaken.

H2. As relative debt levels increase, public sector investment declines.

H3. Current account deficits are correlated with more privatization activity.

H4. High, persistent central government budget deficits are correlated with higher privatization activity.

H5. Lower credit ratings are correlated with increased privatization.

Explanatory variables for each of these hypotheses are tested, along with additional variables for income, debt class (Ddclass), market capitalization (Dmcap), and the regional dummy variables: Latin America and Caribbean (DLAC), Europe and Central Asia (DECA), Asia Pacific (DAPAC), South Asian (DSA), and Sub-Saharan Africa (DSSU). These are added to motivate the discussion in terms of the context and conditions of financial distress, as well as economic and regional nuances.

6.2 General Model Specification

The general equation for the overall estimation is represented by the following equation:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \beta_4 INVEST + \beta_5 CRED + \beta_6 DEFIC + \beta_7 INC + \beta_8 Ddclass + \beta_9 Dmcap + \beta_{10} DLAC + \beta_{11} DECA + \beta_{12} DAPAC + \beta_{13} DMENA + \beta_{14} DSA + \beta_{15} DSU + \varepsilon$$

Where

PRIV is amount of privatization revenues (in millions of US dollars),

DEBT is amount of external debt (in millions of US dollars),

GNI is the size of the gross national income (in millions of US dollars),

CA is the trade deficit of goods and services with the rest of the world,

INVEST is fixed capital formation,

CRED is the country's credit score based on Euromoney's range, with 0 being the lowest and 100 being the highest (the data ranges from 27.0 to 65.8),

DEFIC is the country's deficit represented as a % of GNI,

INC is the dummy variable that distinguishes between low versus middle and high-income countries,

Ddclass is the World Bank's classification for severely, moderately and lightly indebted. Severely and moderately indebted countries were assigned a value of 1 and lightly indebted were assigned a value of 0,

Dmcap is the size of a country's stock market. Countries with stock markets exceeding $50 billion in capitalization were assigned a value of 1 and countries less than this threshold were assigned a value of 0,

DLAC is the dummy variable for Latin America and the Caribbean,

DECA is the dummy variable for Europe and Central Asia,

DAPAC is the dummy variable for Asia Pacific,

DMENA is the dummy variable for the Middle East,

DSA is the dummy variable for South Asia,

DSU is the dummy variable for Sub-Saharan Africa.

The experimentation with different and additive (stepwise) forms of the independent variables is intended to mitigate the impact of excessive noise in any given variable and allow for the possibility that the impact is more pronounced, on a specific variable. The different explanatory variables are systematically added to each regression equation to check the robustness of the estimate on privatization, assess whether the overall estimates are sensible, and mitigate against specification problems due to omitted variables (Bertsimas and Freund 2000).

The multiple regression estimation explicitly controls for many factors which simultaneously affect the dependent variable (Wooldridge 2000). The more applicable

factors added to the model that are useful in explaining the independent variables, the more of the variation in the dependent variable that can be explained. This chapter summarizes the results of the estimations. Complete estimation results including residual coefficients, error terms, F-tests, T-tests, P-values, and confidence intervals of each estimation are given for each equation.

It should be noted that correlation does not equal causation. Moreover, some measures of correlation in macroeconomic modeling, such as R-squared (coefficient of determination), below 0.5 does not necessarily indicate a lack of correlation (Bertsimas and Freund 2000).

6.3 Cross-sectional Analysis

These estimations analyze a cross-section of the data. The last year of the period, 1999, is selected for the cross-sectional study because it includes the lagged effects of high levels of ongoing privatization throughout the decade. It also includes the potential lagged effects of the Asian Financial Crisis of 1997. This presents, in effect, a controlled experiment, as this financial crisis, though global in nature, disproportionately affected the rapidly growing economies of East Asia. The variable INVEST was included only in the time-series regression as there was insufficient data in the cross-sectional analysis. The regional dummies, DLAC, DECA, DAPAC, DMENA, DSA, DSU could not be included in the cross-sectional analysis because of insufficient data for some regions.

6.3.1 Estimation for Debt

The DEBT variable represents the level of debt for 1999. The equation for this estimation is:

$$PRIV = \alpha + \beta_1 DEBT + \varepsilon$$

Taking the most recent year is the most conservative approach, however, it does overestimate debt levels because of the lag.

Table 6.1
Cross-Section Debt Results

CROSS-SECTIONAL DEBT RESULTS			
Multiple R	0.768		
R-Squared	0.590		
Observations	42.0		
	Coefficients	Standard Error	t Stat
Intercept	-1143.089	1669.084	-0.685
DEBT	0.170	0.022	7.580**

**Significant at the .05 level
*Significant at the .10 level

The coefficient for debt is positive as expected. The degrees of freedom (DF) is more than sufficient at 40. The R-squared is high at .59. The regression coefficients are significantly different from zero, and the T-statistic is quite significant at the 5% level, indicating a very strong relationship between debt and privatization. Given the relatively short time dimension of the data, the results need not be interpreted too literally, and could be viewed more as an approximation of a larger data set correlation. Nevertheless, the statistical significance level of debt does suggest that this variable as could be viewed as highly explanatory, lending support for Hypothesis 1 "As relative debt levels increase, more privatization transactions are undertaken." Plots of the residuals (Figures 6.1 and

6.2) indicate that the independent variable exhibits no evidence of multicollinearity, autocorrelation or heteroscadasticity.

Figure 6.1
Debt Residual Plot

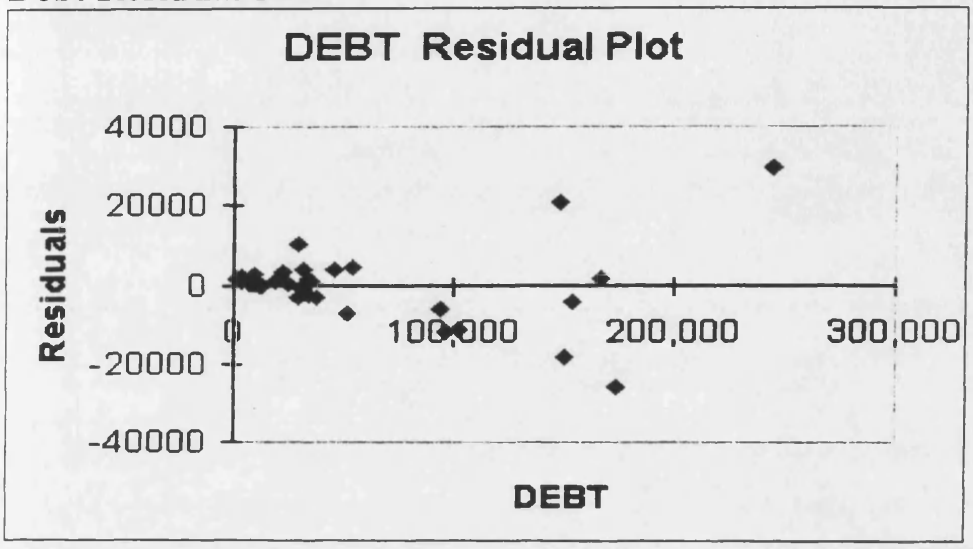
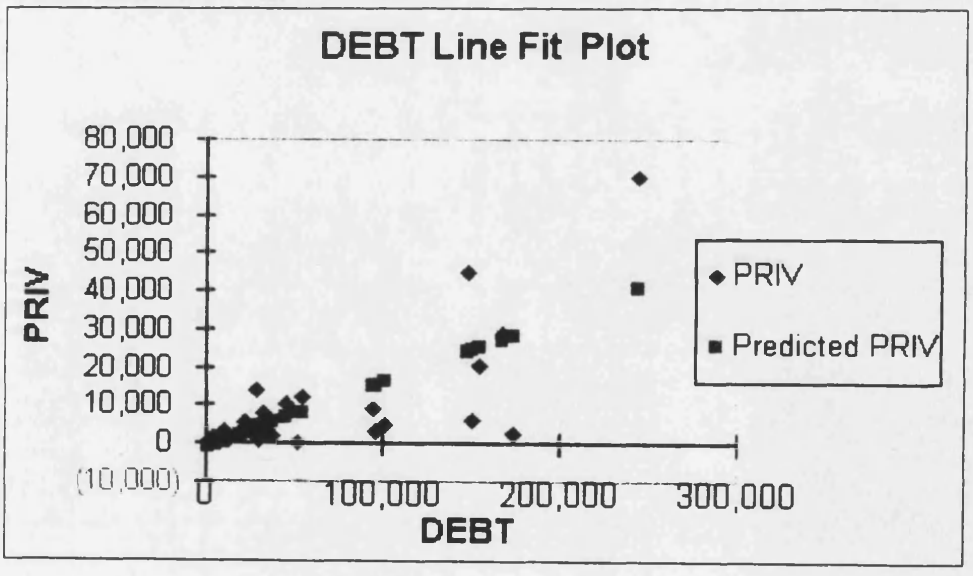


Figure 6.2
Debt Line Fit Plot



Linearity seems to be sufficient, as depicted in the plot of the residuals and the line fit above.

It is clear that there is a strong positive relationship between the amount of privatization and debt, supporting the central hypothesis.

6.3.2 Estimation for Deficit

The equation for this estimation is:

$$PRIV = \alpha + \beta_6 DEFIC + \varepsilon$$

The results show that national deficit is significantly correlated at the 10% level with privatization which lends support for Hypothesis 3: "current account deficits are correlated with privatization activity." As expected, the coefficient is negatively correlated with privatization. Though national deficits occur for countries in good as well as poor financial health, they are frequently an early indicator of financial stress.

Table 6.2 Cross-sectional Deficit Results

Cross-sectional Deficit Results			
Multiple R	0.270		
R-Squared	0.073		
Observations	42		
	Coefficients	Standard Error	t Stat
Intercept	4245.188	2412.597	1.760*
DEFIC	-1246.348	703.919	-1.770*

**Significant at the .05 level
*Significant at the .10 level

6.3.3 Test for Over-Specification

The number of variables is expanded to include GNI and current account (CA). This provides a more detailed insight into the roles of the various factors affecting privatization. When adding independent variables, it is important to test for multi-collinearity. In order to do this, a correlation matrix is created (Table 6.3) of these variables. Except for the expected GNI/Debt high correlation, all other variables are within acceptable ranges. GNI and Debt are highly correlated (.830) and pose the only problem, but this is expected as increased privatization would be associated with larger GNI. This is consistent with Titman and Wessels (1988) who found that debt levels were positively related to country or economy size. That is, ceteris paribus, the larger the country, the more the assets there are to privatize.

Table 6.3 Correlation Matrix for Cross-Sectional Regression

	PRIV	DEBT	GNI	CA	CRED	DDCLASS	DMCAP	DEFIC
PRIV	1							
DEBT	0.768073	1						
GNI	0.706439	0.830811	1					
CA	0.897373	0.64556	0.543143	1				
CRED	0.321829	0.290271	0.337547	0.26605	1			
Ddclass	-0.03037	-0.02211	-0.25728	-0.13537	-0.30428	1		
Dmcap	0.542886	0.579764	0.630936	0.411995	0.491463	-0.14142	1	
DEFIC	-0.26959	-0.45461	-0.34415	-0.22694	-0.12202	0.069333	-0.14108	1

6.3.4 Test for Linearity

The next test is to see if there is a linear relationship between privatization and debt over the study period by squaring the debt term. The results indicate a strong linear relationship, since the coefficient on the squared term is basically zero.

Table 6.4 Test for Linearity

	Coefficients	Standard Error	t Stat
Intercept	372.216	140.494	2.649
Debt	-0.027	0.006	-4.321
Debtsq	0.0000002	0.00000003	6.793

6.3.5 Debt, GNI and Current Account (CA)

The equation for this estimation is:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \varepsilon$$

The R-squared is high. Here the T-statistics for GNI and CA are significant at the 5% level.

Table 6.5 Cross-Sectional Debt, GNI, and CA Results

CROSS-SECTIONAL DEBT, GNI, AND CA RESULTS			
Multiple R	0.947		
R-Squared	0.879		
Observations	42		
	Coefficients	Standard Error	t Stat
Intercept	-336.434	935.688	-0.359
DEBT	0.034	0.025	1.388*
GNI	0.013	0.007	2.03**
CA	1.829	0.196	9.300***

**Significant at the .05 level
*Significant at the .10 level

For CA data, it should be noted that only absolute values are used. While the association is strong, it would normally be a negative correlation. That is, the more negative the current account, the more privatization will occur. The statistical significance is high at

the 10% level. This is in line with theories of financial stress (Cossett and Roy 1991). The error terms are very small and indicate a strong linear relationship.

It should also be noted that the CA is subject to two-way causation. Financial distress can cause current account deficits, but current account deficits can also cause financial distress. With this caveat, a CA deficit can still be a strong indicator of financial distress, however, one must be careful with causation for this variable.

A current account deficit, particularly a large one, indicates difficulties in a government's ability to pay current expenditures. If it continues, an on-going current account deficit can lead to national budget deficits. Both countries and lenders see this situation as a problem. While a firm can eventually go bankrupt, a country must try to renegotiate debt, and if it cannot, it must resort to asset sales in order to reduce its debt. Such was the situation of several countries, such as Argentina, for the second half of the 1990s (Dornbusch 2001).

6.3.6 Debt, GNI and Current Account (CA), Credit Rating (CRED), Debt Class (Ddclass), Stock Market Capitalization (Dmcap) and Deficit (DEFIC)

The equation for this estimation is:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \beta_5 CRED + \beta_6 DEFIC + \beta_8 Ddclass + \beta_9 Dmcap + \varepsilon$$

As mentioned above, a potential problem with adding variables is over-specification. This can result in an artificially high R-Squared. At 34 degrees of freedom, the model is still robust.

Table 6.6 Results for Debt, GNI, CA, DDCLASS, DMCAP and DEFIC

RESULTS FOR DEBT, GNI, CA, DDCLASS, DMCAP AND DEFIC			
Multiple R	0.950		
R-Squared	0.902		
Observations	42		
	Coefficients	Standard Error	t Stat
Intercept	-6263.705	3781.068	-1.657*
DEBT	0.008	0.027	0.280
GNI	0.019	0.007	2.596**
CA	1.887	0.192	9.849**
CRED	59.750	71.687	0.833
Ddclass	4671.907	1799.181	2.597**
Dmcap	1370.126	2327.954	0.589
DEFIC	40.591	286.071	0.142

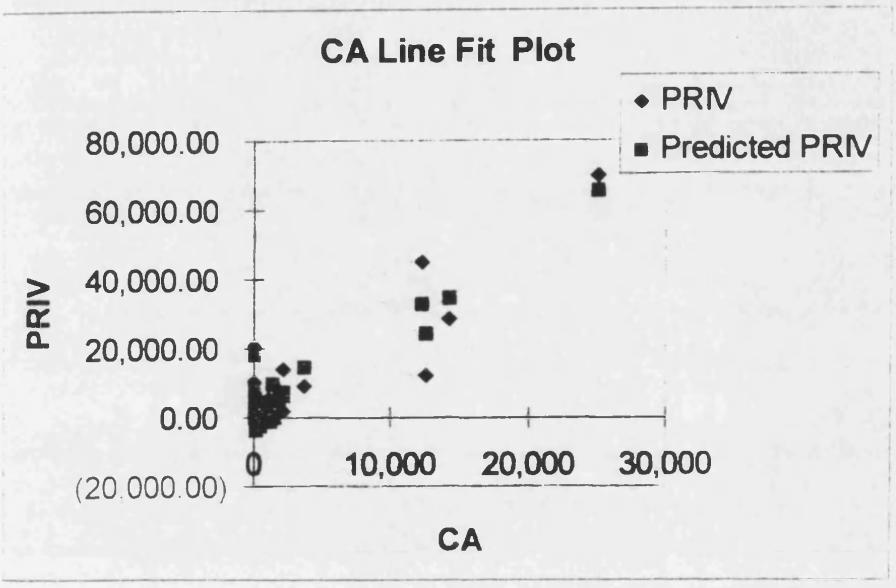
**Significant at the .05 level
*Significant at the .10 level

The coefficients are positive, as expected. Debt is not significant in this test. It may be related to other variables, such as the CA, affecting the results of debt, given the relatively high correlation coefficient of .64.

GNI is significant at the 5% level, indicating again that larger countries tend to do more privatizing. Current account is the most significant at a nearly 1% level. Again, this could be because current account deficits seem to be typically associated with financial stress. It is also due to the fact that many EMCs have relatively thin economies and rely heavily on cross-border trade. This is particularly true in the case of many commodity and extractive industry based EMCs. A negative and worsening current account can

thrust a country into deep financial stress much faster than a larger OECD country. The strong linear relationship between privatization and current account is illustrated by the line fit below.

Figure 6.3
Line Fit for Current Account



The credit rating (CRED) variable is not significant. This may be because of the idiosyncrasies of measuring only one particular period. Credit ratings tend to change considerably from over time, and therefore many long-term trends can be obscured. A cross-sectional view of the effect of this variable may not be particularly meaningful. Hypothesis 5, "high, persistent central government budget deficits are correlated with higher privatization activity," is not be supported by the data.

On the other hand, Debt Class is significant at the 5% level. One would expect this as highly-indebted countries have greater incentive to privatize. Highly-indebted countries are also under much greater financial stress than lightly-indebted countries. Interestingly,

stock market capitalization (Dmcap) is not significant. This goes against prevailing wisdom of privatization prescriptions that privatization is best done in countries with deep capital markets. This makes sense, as the majority of privatizations are not share privatizations, but rather asset sales to either domestic or foreign companies.

Deficit is as not significant in this regression as other variables such as CA and debt class became more important. For many EMCs, the current account is more critical than national deficits, as many of these economies are highly dependent on international trade and transfers.

6.3.7 Debt for Lower-Income and Higher-Income Countries

Testing for debt and income level, I find a correlation in lower-income and even stronger correlation in higher-income countries with privatization.

The equation for both of these estimations is:

$$PRIV = \alpha + \beta_1 DEBT + \beta_7 INC + \varepsilon$$

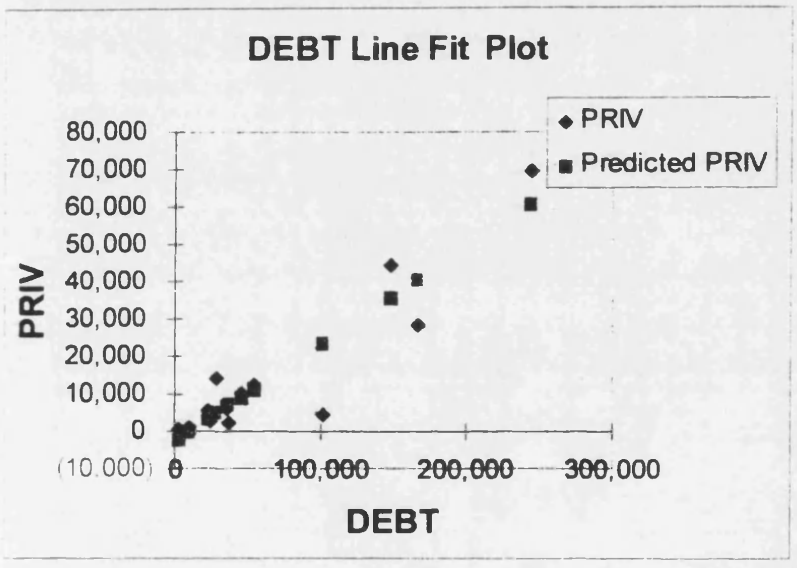
Table 6.7
Debt for Lower-income and Higher-income

Lower-income and Higher-income Debt Regression						
	Lower	Higher				
Multiple R	0.649	0.918				
R-Squared	0.421	0.843				
	Coefficients		Stand. Error		t Stat	
	Lower	Higher	Lower	Higher	Lower	Higher
Intercept	802.020	-2687.026	743.485	3344.693	1.079	-0.803
DEBT	0.055	0.257	0.012	0.033	4.427**	7.688**

**Significant at the .05 level
*Significant at the .10 level

The results for lower-income countries with debt are interesting in that the T-statistic, although significant at the 5% level, is much lower than for higher-income countries. This contrasts with the high T-statistic of debt of higher-income countries. This makes sense from a variety of standpoints. It is expected that higher-income countries have greater access to international debt markets. The line fit below indicates a strong linear relationship between higher-income countries and debt.

Figure 6.4
Debt Line Fit for Higher-income Countries



The T-statistic for debt becomes insignificant when it is regressed with additional variables. In fact, the only variable of significance is GNI for lower-income countries.

6.4 Time-Series Analysis

The time-series data allow us to analyze trends over time, specifically for the study period from 1990 to 1999. Because past events can influence future events and lags in behavior are prevalent in privatization, time is a critical dimension. The 1990s were a

particularly dynamic and high-growth period of privatization. During the decade, privatization spread far and wide to a whole host of EMCs and across a wide variety of industries. Time-series analysis (stochastic) can provide more robust and accurate results because a much larger data set is available, minimizing irregularities of data that might be present in just one cross-sectional year. The bulk of the analysis and interpretation of the results in this chapter will be derived from the time-series analysis.

6.4.1 Model Specification

For the 10-year time-series, it is not possible to examine the variables of credit score (CRED), deficit (DEFIC), indebtedness class (Ddclass) and stock market capitalization (Dmcap) because of gaps in the data series. The equation for this estimation is represented by:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \beta_4 INVEST + \beta_7 INC + \beta_{10} DLAC + \beta_{11} DECA + \beta_{12} DAPAC + \beta_{13} DMENA + \beta_{14} DSA + \beta_{15} DSU + \varepsilon$$

The dummy variables represent the six regions of the study. One of the objectives of this analysis is to obtain as geographically wide a data set as possible. This is because most previous studies of privatization focused on evidence in one or two geographical regions, limiting the robustness of the data. Few have attempted to draw conclusions from a globally and regionally diverse data set. This is important because it means the conclusions will be less limited by differences in political, cultural, and historical idiosyncrasies. However, many countries, particularly those in Africa and former communist/socialist countries do not have privatization and other macro-economic and

financial data extending back in complete from before the mid-1980s. In fact, the data used in this study for many formerly non-capitalistic countries have been available only since the beginning of the 1990s.

In addition, privatization in many EMCs was not underway until the late 1980s or early 1990s. For all of these reasons, 1990 was the earliest year for which fairly complete time-series data is available for the various variables examined in this study. The time-series data covers a 10-year period from 1990 to 1999. While many countries privatized over this period, only those EMCs that privatized a significant amount of assets are included in the study. A significant level is defined in this study as at least 5% of GNI over the 10-year period. This criteria yields a total of 42 countries for potentially 504 observations per variable and 5,040 observations for all variables. The full data sets for all the tests are included in the appendices.

First, I examine potential problems in multicollinearity with the correlation of the independent variables below.

6.4.2 Tests for Multicollinearity, Heteroscadasticity and Autocorrelation

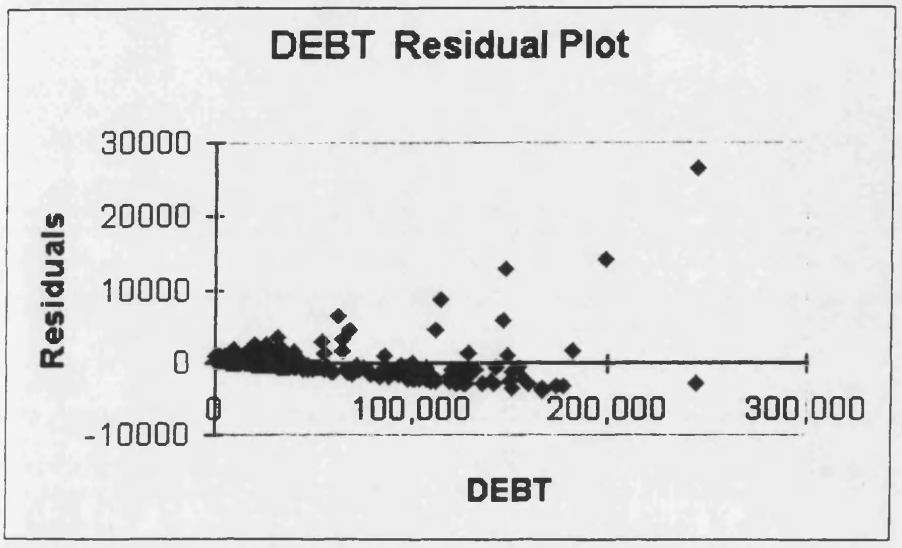
As with the cross-sectional tests, I check for multicollinearity with a correlation test.

Table 6.8
Multicollinearity Check for Time-Series Variables

	PRIV	CA	DEBT	GNI	INVEST
PRIV	1				
CA	-0.38344	1			
DEBT	0.489278	-0.24615	1		
GNI	0.465529	-0.06612	0.819439	1	
INVEST	0.061059	-0.07222	0.100335	0.221039	1

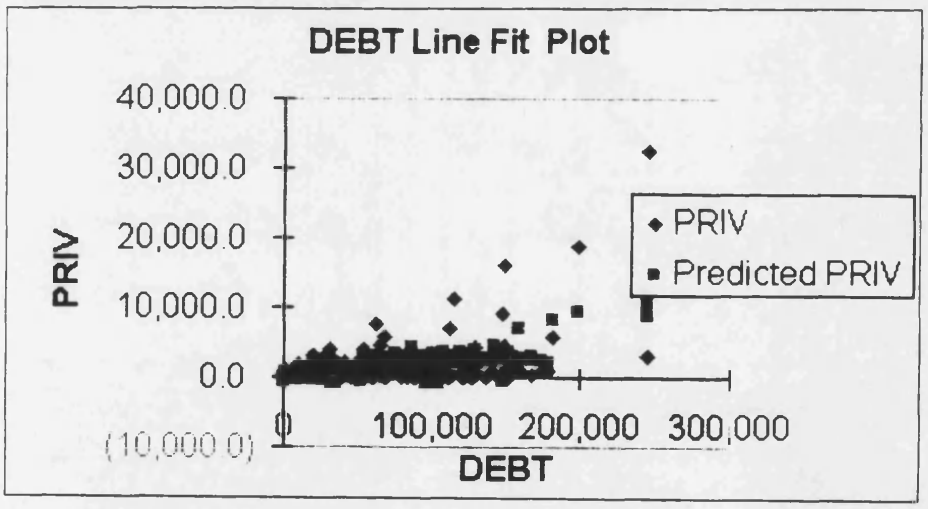
The correlation matrix above shows no serious problems with multicollinearity, except for the expected high correlation between debt and GNI.

Figure 6.5 Debt Residual Plot



The plots of the residuals do not indicate problems with multicollinearity, hetereoscadasticity or autocorrelation.

Figure 6.6 Debt Line Fit Plot



6.4.3 Privatization and Debt

Next, I estimate privatization and debt over the 10-year period. The equation for this estimation is represented by:

$$PRIV = \alpha + \beta_1 DEBT + \varepsilon$$

The very high T-statistic, at 11.318, is significant at the 1% level, indicating a high degree of correlation of privatization and debt over the period. This lends strong support for Hypothesis 1 that privatization increases with debt. The high level of statistical significance is even more impressive than the cross-sectional estimation given that this estimate covers a much more extensive time period.

Table 6.9
Privatization and Debt

TIME-SERIES RESULTS FOR DEBT			
Multiple R	0.489		
R-Squared	0.239		
	Coefficients	Standard Error	t Stat
Intercept	-231.174	128.508	-1.798*
DEBT	0.025	0.002	11.318**

**Significant at the .05 level
*Significant at the .10 level

6.4.4 DEBT, GNI, CA, and INVEST

Adding these variables to the debt regression provides a more complete picture of how the various variables may have affected privatization during the study period. The equation for this estimation is represented by:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \beta_4 INVEST + \varepsilon$$

Table 6.10
DEBT, GNI, and INVEST

Debt, GNI, CA and INVEST			
Multiple R	0.591		
R-Squared	0.350		
	Coefficients	Stan. Error	t Stat
Intercept	166.163	299.884	0.554
DEBT	0.006	0.004	1.584*
GNI	0.005	0.001	4.777**
CA	-0.154	0.020	-7.779**
INVEST	-3.640	2.817	-1.292*

**Significant at the .05 level
*Significant at the .10 level

CA is very significantly negatively correlated with privatization at the 5% level. This is because the current account data for the study countries over this period, are, by and large, negative. This T-statistic is among the highest in the study. This is indicative of the fact that most countries in the study have been running multi-year current account deficits. This lends support for Hypothesis 3 that states that "current account deficits are correlated with privatization." According to the hypothesis, the larger and more negative the current account, the more privatization there will be. This is because current account deficits are the source of significant financial stress for countries. CA deficits often have a cumulative effect, with each year of an increasing deficit leading to increasing financial stress.

Few countries, particularly smaller countries, can sustain year after year of negative current accounts without facing serious financial distress. Larger countries have greater wherewithal, and because they can often finance their CA deficit for many years. Smaller countries often lack easy access to the capital markets. One only has to consider

the United States as the most obvious and extreme example. CA deficit is the most significant variable correlated with privatization over this period.

GNI is also significant, indicating a strong correlation with country (economy) size and privatization. This supports the view that privatizing countries need a critical amount of privatizable assets, as well as sufficiently deep economies to foster the privatization of SOEs. While "world class" SOEs can develop in thin economies, SOEs with high quality products and services, ceteris paribus, are more likely to be grown and developed in deeper economies (Djankov and Murrell 2000). In a "deep" as opposed to "thin" economies, SOEs develop the scale and scope for investment and product line enhancement, and are better able to keep pace with global innovation in their particular industry.

Debt is also significant at the 10% level. This estimation provides an indication about how countries can build up unsustainable levels of debt. The fact that CA and GNI are significant at the 5% level may indicate a degree of causality, in that large countries can incur large CA deficits then finance the negative account through debt borrowings. This cause and effect has been cited by Dornbusch (2000) in the cases of Brazil, Argentina and several other EMCs, particularly in the 1980s and 1990s.

INVEST is significant at the 10% level lending support for Hypothesis 2 that as "debt increases, public sector investment declines." The coefficient and T-statistic are negative meaning that as debt increases, investment will become increasing negative, as predicted

by the hypotheses and the findings of Krugman (1988), Gilson (1997), Milgrom and Roberts (1992), Barnett (2000), et al.

6.4.5 Early 1990s and Late 1990s

Next, I examine how the nature of privatization and the factors affecting it may have changed over the decade of the 1990s due to financial distress. For this purpose, I divide the sample data into two periods: 1990-1994, and 1995-1999. The decade of the 1990s is especially useful for an empirical study as this is when privatization changed from a sporadic, regional phenomenon to an international, pervasive policy instrument in a wide variety of EMCs. Significantly, the 1990s were time of dramatic socio-economic change for many EMCs and entire regions. The 1990s saw the transformation of the Soviet Union, creating new countries, many of which began to immediately initiate privatization programs. The 1990s also saw the meteoric rise of economies of the Asian newly industrialized countries (NICs), then their equally meteoric, if temporary, economic fall for many. On the other hand, many countries in Latin America, while active privatizers, fell deeper into debt and financial distress. Most sub-Saharan countries actually lost economic ground and shrank in terms of GNI and suffered grave financial consequences. South Asia and Middle East, North African countries generally grew moderately, if at all.

In this backdrop of study countries, one can see a variety of economic situations, economic systems, institutions, and political governing systems. Statistically significant trends observed across these differences may be seen as more generalizable and robust than the standard anecdotal regional or country account. Few EMCs went into this

decade and emerged unchanged in terms of their debt, privatization and macroeconomic conditions. Analyzing the decade in two periods may allow one to discern changes that occurred over the period.

The variable INVEST could not be included in the part of the analysis focusing on the first half of the 1990s versus the second half of the 1990s because of discontinuities in several of the data series.

6.4.6 Early 1990s

The "early 1990s" estimation focuses on the first five years of the 1990s. This was a time when many smaller EMCs were just beginning to engage in privatization for the first time (Kikeri 1998). Several larger EMCs had begun their privatization efforts in the 1980s and now their programs were either continuing, or winding down. The equation for this estimation is represented by:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \varepsilon$$

Table 6.11
Early and Late 1990s

Early and Late 90s Results						
	Early 90s	Late 90s				
Multiple R	0.472	0.635				
R-Squared	0.222	0.404				
Adjusted R-Squared	0.210	0.395				
Observations	197	210				
	Coefficients		Stand. Error		t Stat	
	Early 90s	Late 90s	Early 90s	Late 90s	Early 90s	Late 90s
Intercept	-76.296	-225.926	115.979	202.891	-0.658	-1.114*
DEBT	0.020	0.003	0.005	0.005	3.992	0.463
GNI	-0.001	0.007	0.001	0.001	-0.486	4.665**
CA	-0.005	-0.179	0.032	0.026	-0.155	-6.753**

**Significant at the .05 level
*Significant at the .10 level

Interestingly, GNI exhibits a negative coefficient. Moreover, the T-statistic is not significant. This may be because smaller countries were more active in privatization than larger ones in the early 1990s. Many of the larger countries had gone through a bout of privatization in the 1980s, and now many smaller countries were beginning to privatize (Ramamurti 1999). Interestingly, CA does not show a strong coefficient or T-statistic. In fact, they are both negative. It can be deduced from this that CA did not pose a problem for most privatizing EMCs during the early 1990s.

6.4.7 Late 1990s

The late 1990s convey a different story that reflects, in part, a change in the macroeconomic situation of many EMCs as well as trends in privatization. Debt is no longer significant, however, GNI and CA are significant at the 5% level. In the later half of the 1990s, larger countries picked up their pace of privatization (World Bank 2001). They also faced deepening CA deficits due, in large part, to several global financial crises

of the late 1990s that disproportionately affected EMCs. The 1990s were the decade of renewed and accelerated globalization (Dicken 2003). Many EMCs rely on foreign exchange for a significant proportion of their economic growth and the exports of many EMCs tend to be dominated by commodities. The 1990s were a time of extreme price fluctuations in the prices of commodities, causing many EMCs to experience large negative CA balances.

6.4.8 Higher and Lower-income Countries

As is done in the cross-sectional analysis, I now divide EMCs by higher and lower-income. The equation for this estimation is represented by:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \varepsilon$$

Table 6.12
Higher and Lower-income Countries

Higher and Lower-income Results						
	Higher	Lower				
Multiple R	0.675	0.564				
R-Squared	0.456	0.319				
Adjusted R-Squared	0.443	0.311				
Observations	125	284				
	Coefficients		Stand. Error		t Stat	
	Higher	Lower	Higher	Lower	Higher	Lower
Intercept	-119.806	91.317	376.698	46.546	-0.318	1.962*
DEBT	0.023	0.004	0.014	0.002	1.689	2.594*
GNI	-0.002	0.001	0.005	0.000	-0.393	3.528**
CA	-0.316	0.038	0.056	0.010	-5.640	3.893**

**Significant at the .05 level
*Significant at the .10 level

The estimation for higher-income countries shows that Debt plays a significant role in privatization, while GNI is not significant.

Lower-income countries show a strong correlation with all three variables. Over the decade, these three variables were good determinants of privatization. All three are statistically significant at or beyond the 5% level, which is striking, lending support for Hypotheses 1 and 3. Interestingly, CA is positively correlated with privatization. Lower-income countries with a positive CA were privatizing. There are two possible interpretations of this statistic. First, it could mean assets privatized contribute to the positive CA, which is supported by the findings of Barnett (2000). Second, it could be due to the fact that debt overhang in lower-income countries is so severe that these countries must maintain a strong CA just to pay their debt service. This was in fact the case with many poor, particularly commodity-based economies of the 1990s (Dornbusch 2000).

For lower-income countries, there is a strong correlation with GNI. The interpretation of this, once again, is that poorer countries with large economies privatize more. Some of the reasons for this, as with all countries, could be that there are more assets to privatize and the economies are deeper.

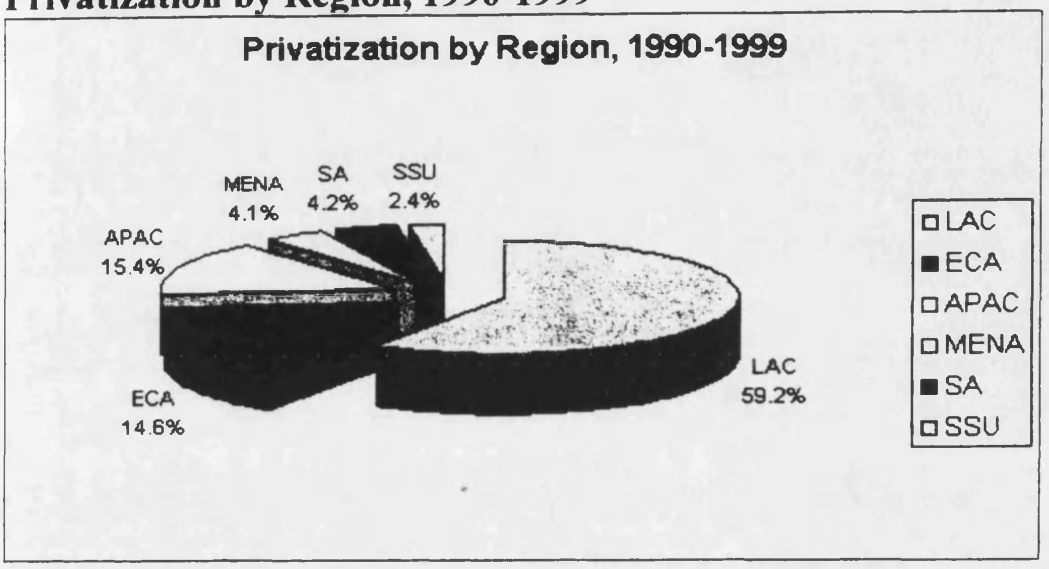
For higher-income countries, the greater the CA deficit, the more these countries privatized. GNI is not really a factor. Debt is significant at the 10% level. As pointed out earlier, higher-income countries tend to be more integrated into the world economy. Information is better, and it would be easier for higher-income countries to find buyers

and investors for their privatizing companies. The SOEs of higher-income countries are also likely to be more desirable because they tend to be larger, better-managed and higher quality assets (Nellis 2001). Many lower-income countries are unable to privatize their SOEs because there are few buyers and the due diligence costs for buyers to investigate potential purchases are too onerous to justify minimal upside potential. Also the market may simply be too small to be of interest to all but a few buyers. This was the case in Egypt's foray into privatization in the 1990s, when it discovered that many of its SOEs had little or negative value to the domestic and international private markets (Abu Shair 1997).

6.4.9 Regional Analysis

Figure 6.3 portrays the level and intensity of privatization has varied considerably among regions in the 1990s, with Latin America and the Caribbean (LAC) being one of the most active privatizers of the world, accounting for nearly 60% of privatization in the 1990s and with South Asia (SA) and the Middle East, North Africa (MENA) being among the least active, both in terms of the number of privatization transactions and the overall revenue volume.

Figure 6.7
Privatization by Region, 1990-1999



LAC	ECA	APAC	MENA	SA	SSU
168,101	41,402	43,833	11,706	11,780	6,909

**billions of US$*

Source: World Bank Data Tables, 2001.

Latin America clearly privatized more than the other regions by a significant margin. After Latin America, Asia Pacific and Europe and Central Asia were roughly tied for second at about 15% share each.

6.4.10 Regional Dummy (Binary) Variables

Including dummy variables for regions controls for regional effects. When I include the regional dummies, I can see that the relationship between debt and CA and privatization is still strong and significant. The equation for this estimation is represented by:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \beta_{10} DLAC + \beta_{11} DECA + \beta_{12} DAPAC + \beta_{13} DMENA + \beta_{14} DSA + \beta_{15} DSU + \varepsilon$$

Table 6.13
All Regions

ALL REGIONS			
Multiple R	0.604		
R-Squared	0.365		
Adjusted R-Squared	0.352		
Observations	409		
	Coefficients	Standard Error	t Stat
Intercept	-152.370	197.261	-0.772
DEBT	0.007	0.004	1.854**
GNI	0.005	0.001	4.731**
CA	-0.144	0.020	-7.205**
LAC	330.604	277.156	1.193*
ECA	-35.851	278.505	-0.128
APA	-454.628	355.508	-1.279*
MENA	-227.133	355.763	-0.638
SA	-759.883	397.821	-1.911*
SSU	57.560	233.368	0.247

**Significant at the .05 level
*Significant at the .10 level

This estimation shows that there is a general relationship between privatization and financial distress variables and is strong across diverse regions.

Next I disaggregate by region. The estimation results are shown in Table 6.14.

Table 6.14
Individual Regions

Individual Regions						
	LAC	ECA	APAC	MENA	SA	SSU
Multiple R	0.700	0.625	0.598	0.567	0.737	0.401
R-Squared	0.490	0.390	0.358	0.322	0.543	0.161
Adjusted R-Squared	0.476	0.369	0.316	0.276	0.489	0.131
Observations	110	89	50.000	49.000	30.000	90.000
Intercept	-328.013	131.236	218.598	163.410	61.803	34.759
	(-0.844)	(1.507*)	(0.631)	(2.480**)	(0.468)	(1.082)
DEBT	0.035	0.012	0.006	-0.012	0.008	0.000
	(-2.030**)	(3.861**)	(1.251*)	(-1.972*)	(1.098)	(-0.096)
GNI	-0.005	-0.001	0.001	0.007	0.001	0.002
	(-0.894)	(-1.555*)	(1.055)	(2.917**)	(0.654)	(3.558**)
CA	-0.334	-0.180	0.064	0.029	0.084	-0.006
	(-5.408**)	(-6.738**)	(2.628**)	(1.006)	(1.792*)	(-0.381)

**Significant at the .05 level
*Significant at the .10 level
Note: T-statistics in parentheses

6.4.11 Latin America and the Caribbean (LAC)

The equation for this estimation is represented by:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \beta_5 DLAC + \varepsilon$$

By some measures (dollar volume and number) LAC is perhaps the best region for a study of privatization, because it was the most active privatizer in the 1990s, with over $168 billion of privatization value over the decade. Significantly, this region had the highest debt levels of any region in the world and had the highest number of severely indebted countries in the sample. Not surprisingly debt's T-statistic is significant at the 5% level. Given the theory that countries were compelled to privatize more for financial stress reasons, it is no surprise that GNI is not a significant factor. Countries, large and small, were in financial trouble. CA is also significant at the 5% level and, as expected, negatively correlated. High CA deficits, typically over the course of many years, seem to be a factor in privatization activity.

6.4.12 Europe and Central Asia (ECA)

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \beta_6 DECA + \varepsilon$$

The Europe and Central Asia region presents a very interesting set of results. Most of the countries in the sample are those of economies in transition (EIT), who were transforming their nations from planned socialist economies to market economies. Unlike countries like China, for example, most of the countries in this region chose to make the transition as quickly as possible ("shock therapy") instead of gradually as China has done. The result has been a significant amount of privatization. At the same time, in the course of the transition, these countries piled up a large amount of debt in a very short period of time to finance the fast transition (Nellis 2000). This debt in turn, made privatization not just an ideological statement, but also a necessity. I see a high T-statistic at the 5% significance level. There is a negative correlation with GNI, as all countries, regardless of size, were actively engaged in privatization. The correlation with CA is even stronger than for debt, at the 1% level, perhaps indicating strong financial pressures to finance the CA.

6.4.13 Asia Pacific (APAC)

The equation for this estimation is:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \beta_{12} DAPAC + \varepsilon$$

The Asia Pacific region represents a whole different set of macroeconomic conditions than most of the world during most of the 1990s. During much of the 1990s, many of the

economies in the study were booming. They benefited from very strong balance sheets (with relatively less debt than other EMCs), strong GNI growth, and, for the most part, positive CAs as many of these nations were characterized as being Asian export-oriented, manufacturing and trading centers. This changed dramatically for many countries in this region in the face of the Asian Financial Crisis of 1997. It brought about one of the quickest and most destructive financial reversals of fortune experienced since the World War II (International Monetary Fund 1999). The financial crisis that erupted in mid-1997 led to sharp declines in the currencies, stock markets, and other asset prices of a number of Asian countries, threatened these countries' financial systems, and disrupted their real economies, with large contractions in activity. The crisis started in Thailand, and soon spread to nearly all countries in Asia, with the exceptions of very poor countries (Myanmar, Vietnam, etc.), China, and entrepots and entrepreneurial centers such as Hong Kong, Taiwan and Singapore, though they too suffered. There is strong T-statistic of debt at the 10% level, and an especially strong T-statistic at the 5% level for CA, because after the crisis, many countries in Asia privatized to improve their balance sheets.

6.4.14 Middle East and North Africa (MENA)

The equation for this estimation is:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \beta_8 DMENA + \varepsilon$$

The MENA region had slow or virtually no economic growth during this period. These economies are characterized by lack of depth and diversity. The range, number and quality of privatizable assets are quite limited. I see that the T-statistic for GNI is

significant at the 5% level. Only those countries with a sufficient number of attractive assets to privatize did so during the 1990s. Debt is also significant at the 10% level. For example, few MENA countries have the economic depth and sophistication of SOEs to attract large numbers of buyers of assets. Even the largest MENA country, Egypt, has difficulty in selling all but the most successful SOEs.

6.4.15 South Asia (SA)

The equation for this estimation is:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \beta_9 DSA + \varepsilon$$

The sample number of countries for South Asia is the smallest of any region, and includes only three countries—India, Pakistan and Sri Lanka. It is difficult to conclude very much from this small set of data. Moreover, for most of the 1990s, these economies were growing only slowly and privatized very little. These economies were also not impacted by the Asian financial crisis in any significant way. Thus, only CA of the three factors studied is significant. This makes sense in light of the history of fiscal mismanagement all three of these countries have. The main driver of privatization is in response to the fiscal pressures brought about by CA deficits and budget overruns.

6.4.16 Sub-Saharan Africa (SSU)

The equation for this estimation is represented by:

$$PRIV = \alpha + \beta_1 DEBT + \beta_2 GNI + \beta_3 CA + \beta_{15} DSU + \varepsilon$$

Many SSU economies performed poorly during the 1990s. The countries were adversely affected by declining commodity prices, political instability, public health crises, and relatively less FDI. While many SSU countries were heavily indebted, and increased their debt during the 1990s, privatization was not a priority for many of these countries given the more dire problems with which they were contending. Current accounts in many countries were mixed, but did not generate financial pressure. GNI has the only significant T-statistic.

SSU also suffers from the same problems as MENA, in that most economies are too underdeveloped and small to attract sufficient buyers for privatizable assets. The economies that are large and deep enough, such as South Africa, had a disproportionate amount of privatization activity. South Africa's size, as well as the quality of its assets, enable it to privatize relatively more than its other African neighbors.

6.5 Summary

The empirical exercises explore the relationship between privatization and a variety of financial distress variables. External debt, the primary explanatory variable, appears to exhibit a robust correlation with privatization amounts. The major finding is that more privatization is strongly correlated with negative or deteriorating macroeconomic performance, as manifested in the financial distress factors modeled in this study.

Specifically, more privatization appears to be positively correlated with 1) increases in the level of external debt; 2) declining public sector investment; 3) a negative and

worsening current account; and 4) central government budget deficits. There does not seem to be a positive relationship between low country credit ratings and privatization. This could reflect the lack of sufficient data, and the fact that only one year could be surveyed.

There is strong statistical support for Hypotheses 1 (External Debt), 2 (Public Sector Investment), 3 (Current Account), and 4 (Budget Deficits) and insufficient support for Hypothesis 5 (Country Credit Ratings). These findings are consistent with and extend the empirical work of Krugman (1988), Gilson (1997), Zwiebel (1996), Lamont (1995), and Titman and Wessels (1988).

Chapter Seven
Summary

7.1 Introduction

This study describes the effects of financial distress and the motivations to privatize in EMCs. The results support the hypothesis that financial distress factors have a positive effect on privatization. Among EMCs that privatize, those that experience macroeconomic financial distress exhibit a higher amount of privatization.

Extending the macro-economic literature of the reasons surrounding privatization, the empirical investigation tests the relationship between the level of financial distress and the incentives for privatization in a sample of 42 EMCs in different industries, industrial sectors and regions of the world over a ten-year period. The theoretical foundation of this relationship draws from general financial distress theory (Myers 1977; Milgrom and Roberts 1992). The empirical analysis employs various econometric specifications to find the best fit between the available data and the conceptual hypotheses.

The results are consistent with empirical work on financial distress in firms and countries that find that financial distress creates imperatives to divest assets. Previous empirical work on privatization focused mainly on economic efficiency within a specific industry or region or budgetary explanations. The results appear robust across industries and regions and are qualitatively the same for both cross-sectional and time-series samples.

7.2 Summary

Debt is significant, both in the cross-sectional and the time-series series analysis. Debt is significant across regions of the world, even those regions that were not very active privatizers in the 1990s. Debt is more significant in the late 1990s, coinciding with a time of increased financial distress for many countries, particularly in Asia. This lends support for Hypothesis 1, which states, "as relative debt levels increase, more privatization transactions are undertaken."

There is strong support for Hypothesis 2, which states, "as relative debt levels increase, public sector investment declines." The coefficient and T-statistic are negative, meaning that as debt increases, investment will become increasing negative, as predicted by the hypothesis and the findings of Krugman (1988), Gilson (1997), Milgrom and Roberts (1992), and Barnett (2000), et al.

There is strong support for Hypothesis 3, which states, "current account deficits are associated with privatization activity." The current account (CA) shows a strong significant correlation with privatization, and in some cases, even stronger that debt. This is interesting and unexpectedly strong, and is perhaps a result of the incredible economic challenges faced by many EMCs during the 1990s. In small and thin economies, the CA can be a significant component of economies; particularly those that rely on foreign exchange of commodity goods whose prices fluctuate with the global markets (Ossowski, Richardson, and Barnett 2000). The average worsening of the CA suggests that those countries with more dire balance sheets privatize relatively more of their assets due to

financial pressures. The relationship between the CA and privatization is even stronger in smaller countries where there is much less financial slack.

Countries with poor budgetary discipline, such as Argentina, use privatization as a means to finance their domestic spending for much of the decade. The worsening economic conditions of many EMCs in the 1990s saw deterioration in the CA and a subsequent dramatic increase in privatization. With worsening CA deficits, many EMCs were unable to pay their debt service, and had to even take on more debt to pay their existing debt service.

There is strong support for Hypothesis 4, which states, "high, persistent central government budget deficits are correlated with higher privatization activity." I find that the national deficit is significantly correlated at the 10% level with privatization, which lends support for this hypothesis. As expected, the coefficient is negative, indicating that deficits are inversely correlated with privatization. Though national deficits occur in countries in good as well as poor financial health, they are frequently an early indicator of financial stress.

Hypothesis 5, which states, "lower credit ratings are correlated with increased privatization" is found to be inconclusive. Intuitively it would seem that EMCs with higher credit ratings would have more debt, because lenders would provide more debt to countries with greater credit worthiness. This is not the case. Like firms, countries with mid-to-poor credit ratings tended to have more debt. This is because their very

indebtedness impairs their ability to pay debt service, and degrades their credit rating. There does not seem to be a positive relationship between low country credit ratings and privatization. This could also reflect the lack of sufficient data and the fact that only one year of data is available.

7.2.1 Other Variables

GNI. This variable is found to be highly correlated with privatization. It makes sense that larger countries would have more assets to privatize, most likely higher quality assets, and greater access to global markets.

Stock Market Capitalization Dummy (Dmcap). As far as stock market size, what emerges from the research is that most privatization transactions in EMCs are not equity sales (as is more common in developed countries), but rather outright sales of entire SOEs or assets. Therefore, the stock market is much less important.

Indebtedness Dummy (Ddclass). On the other had, Debt Class is a significant indicator of the propensity to privatize. I would expect this to be the case, as highly indebted countries would have greater incentives to privatize. Highly indebted countries are also under much greater financial distress than slightly indebted countries. Highly indebted countries have been under pressure for some time to become less indebted. Therefore, they have most likely explored a wide range of options before divesting assets. This is in line with Gilson's theory of the "fire-sale."

Regional Dummies (DMENA, DLAC, DECA, DAPAC, DSA, DSSU). These variables uncover important regional differences and commonalities in financial distress and privatization. The Asia Pacific region presents a good example. The evidence shows clearly the rapid increase in privatization in the region (APAC) after the Asian Financial Crises, which hit in 1997 and caused extended regional macroeconomic distress for many countries. There is a strong positive correlation for privatization in the years after the crisis, particularly in those countries that were especially hard hit. The same phenomenon is seen in the Latin America and Caribbean region (LAC) during their period of regional financial distress.

7.3 The Significance and Contribution of the Research

The research is important in many ways. First this paper demonstrates another leading cause of privatization, one that has received relatively little attention, and virtually no extensive empirical investigation. While financial distress as a leading cause of emerging market privatization has been conjectured, this paper provides empirical evidence supporting it as a major cause.

This study is one of the most significant positivistic (as opposed to normative and pragmatic) studies in recent years. Privatization research has suffered from being overly politicized with normative studies with often political agendas dominating as well as pragmatic cookbook-like "how to" studies, "best practices" and "lessons learned" which suffer from lack of generalizable results and relatively low intellectual and academic rigor.

The research may also serve governments in how they view and promulgate privatization. The results of this study may induce governments to be more sensitive as to the timing, methods, procedures, and conditions of privatization—so that they may be more inclined to create conditions and to develop strategies that would be more advantageous.

Countries may be influenced to try harder to privatize in a way that achieves maximum value and social utility for governments and their constituents. For example, governments may realize that perhaps the best time to privatize is not when they are in debt, overextended financially, and in need of capital quickly, but when they can undertake privatization in a measured pace, free of the pressures of having to sell assets to service debt or other financial obligations.

Privatization in this situation often leads to insufficient planning of the selection, preparation, and sale of assets. Timing of the privatization process is accelerated with insufficient regard for the synchronicity with micro and macro economic factors and the consideration of public sentiment. In essence, financial distress puts the needs of financial obligations above the needs of the privatizing country.

Countries could be more sensitive to their debt levels, budget planning, current account balance and other major factors influencing national financial and economic health. Many SOEs play a vital role in social and economic welfare of a country and should be divested carefully, after considerable analysis of the advantages and disadvantages of

privatization. Particularly in EMCs, where markets are thin, developing or nonexistent, SOEs provide goods, services, and investment where private firms could not. Sudden, reactionary privatization of these SOEs and, in some cases, whole industries, can be detrimental or even catastrophic for EMC economies. Overly rapid privatization in response to financial distress can also flood the market with too many privatization sales resulting in artificially low prices and at poor terms. If countries recognize the symptoms of reactionary privatization due to financial distress, then perhaps they may improve how they manage this complex and important process.

Typically, the best assets are sold first because they will generate the greatest sales revenues in the shortest period of time. These are usually the "crown jewels." Because these assets are often the most valuable, their privatization should given more care, time and consideration in how they are sold or divested.

Rushing the process also makes it easier for the privatization to be corrupted by unscrupulous governmental officials as well as private investors, resulting in scandals, graft and outright theft of public assets. The fact that the most valuable assets and public companies are often privatized first and at the quickest pace only makes the perception of privatization all the more unsavory in the eyes of the public. The privatization process can become a lightning rod for criticism about the public purpose, corruption, and efficacy of achieving simultaneous public and private objectives.

This study also lends empirical support to the application of financial distress theory, which enjoys strong theoretical acceptance in the field of financial economics. This is significant because both the existing theoretical explanations of efficiency and the socio-political causes have shown to be incomplete explanations for privatization, particularly in emerging markets. Financial distress theory illustrates a clear causality whereas the other two explanations are perhaps best described as justifications for the implementation of privatization policy. In other words efficiency and socio-political rationales are often normative and pragmatic in nature, and financial distress theory is explanatory and positivistic with a high correlation of causality.

Privatization has promised much in the way of unlocking unrealized value of public assets, of increasing public shareholding, of generating increased competition, and of improving efficiency. However it has fallen short in most of these potentials. Moreover, it has often created new problems in terms of public accountability, graft, and the dubious perception of public and private partnerships. This paper has shown that most privatization in emerging market countries (during a period of the greatest amount of privatization) has been deterministic and driven by financial forces, not policy, efficiency gains or ideology.

The findings of this study show that countries with smaller GDPs tend to be more sensitive to financial distress because they have less financial slack and fewer financial options, a smaller pool of creditors, less advantageous international credit terms, fewer assets to privatize, a generally less attractive economic environments for FDI, and

generally more volatility in their national economies. This study could encourage smaller countries to exercise more rigorous financial management discipline than their larger cohorts.

The research could also be useful to investors wishing to pursue investment opportunities in emerging markets, helping to match sellers (governments) with buyers (private capital). By better understanding the relationship between financial distress and privatization, investors could better time when to invest in privatization, enabling them to invest earlier in the cycle and to perhaps develop more cooperative relationships with governments earlier on, helping to design privatization strategies and programs that would be perhaps more attractive and practical to the private sector.

7.4 Implications for Future Research

The implications for further research are many. This study has focused on emerging markets. A similar study might focus on industrialized countries. Such as study might investigate if financial distress has equally robust explanatory power in these countries. It would be useful to ascertain if there are indeed differences in the types of assets privatized, how financial distress is manifested in the privatization process, the timing of privatization, and the processes of privatization. For example, anecdotally, it would appear that more "share privatizations" and fewer outright total sales of companies and assets are undertaken in industrialized countries. Is this actually the case and if so, why? Other questions that could be addressed are the differences among industries that are privatized in industrialized countries? Why are some industries, such as water utilities

and public pension system rarely privatized in industrialized countries but readily privatized in emerging markets?

It would appear that privatization activity in emerging markets tends to be more extensive than in most industrialized countries. Why does not financial distress affect industrialized countries in the same way?

There is also an opportunity to investigate why industrialized countries seem to go through less extreme financial distress and with a lower degree of frequency than emerging market countries. While this paper has addressed some of those causes, it was not the primary focus of the research. The seemingly endless financial crises in many emerging market countries not only affects privatization, but creates a whole array of deleterious conditions for these countries and the quality of life for their residents.

Additional research could look into a potential opportunity for industrialized countries to examine emerging market countries as models for how to reduce the share of government as a percentage of GDP. Reducing government through privatization is the stated goal of many industrialized countries. Thus far, emerging market countries appear to have been more successful at rapid and substantial privatization.

This research may also stimulate the investigation of the applicability of other aspects of financial economics to macroeconomic and social phenomena. This interdisciplinary approach is infrequently employed, yet holds significant potential. For example, how

might the theory of capital structure be applied to macro economies? There would seemingly be endless possibilities for this kind of interdisciplinary-theoretic approach with increasing global capital flows, investment, and greater economic global interconnectedness.

Appendix A
Definitions of Pertinent Terminology

Commercialization. Status of a state enterprise that is financed mainly by internally generated revenues (tariffs) and thus has financial autonomy to operate as a business; its access to government support is very circumscribed, e.g., limited to public services.

Concession. An arrangement whereby a private party leases assets from a public authority for an extended period, and has responsibility for financing specified new fixed investments during the period; these new assets then revert to the public sector at expiration of the contract.

Contracting Out. This is the simplest form of privatization and it is widely used. It involves contracting of service provision to the private sector, usually for a defined period of time.

Cross-subsidy. The charging of some customers more than the cost of service in order to subsidize the other customers.

Current Account. The balance of payments current account; the sum of net exports of goods and non-factor services, net factor service income, and net current transfers.

Emerging Market Country (EMC). The distinction between an "emerging market economy" and a "developed" economy is taken from the groupings devised by the International Monetary Fund (IMF). These categories are determined by per capita

output (gross domestic product per capita). Typically, countries labeled as having "developed" markets are those with large industrial bases and per capita incomes around $20,000 per year. The lower-income economies are labeled as "emerging" markets, and they generally have a per capita income between $300 and $2,000 per year.

External Debt. Long-term debt is defined as debt that has an original or extended maturity of more than one year and that is owed to nonresidents and repayable in foreign currency, goods, or services. Long-term debt has three components: public debt, which is an external obligation of a public debtor, including the national government, a political subdivision (or an agency of either), and autonomous public bodies; publicly guaranteed debt, which is an external obligation of a private debtor that is guaranteed for repayment by a public entity; and private nonguaranteed debt, which is an external obligation of a private debtor that is not guaranteed for repayment by a public entity. Short-term debt includes the following: interest in arrears on long-term debt, which is interest payment due, but not paid, on a cumulative basis; and short-term officially guaranteed suppliers' credit. Total external debt is the sum of public, publicly guaranteed, and private non-guaranteed long-term debt, use of IMF credit, and short-term debt.

FDI. Foreign Direct Investment

Indebtedness. The World Bank definitions of indebtedness were used to classify economies. Severely indebted means either of the two key ratios is above critical levels: present value of debt service to GNI (80%) and present value of debt service to exports (220%). Moderately means either of the two key ratios exceeds 60% of, but does not reach, the critical levels. Slightly indebted means either of the key ratios are below 60%.

Initial Public offering (IPO). Initial public offering of shares of a company on the market (usually through a stock exchange).

Management Contract (or management privatization). An arrangement where a private contractor assumes responsibility for a full range of operation and maintenance functions, with authority to make day-to-day management decisions. Compensation may be based partially on services rendered (as for service contracts) and partially on performance achieved (as in profit sharing). Under the agreement, the government still retains complete ownership of the state-owned enterprise. This form is effective in tapping the talent and efficiency of the private sector without relinquishing control. The private sector may be forced to produce goods and services which do not conform to an efficient production set.

Sale of Assets. Divestiture is a total sale of all or part of the company to private investors. There is actual change of ownership of an enterprise from the public to the private sector. This form of privatization is easier in developed, industrialized countries where capital markets are well organized and developed (Pack 1991). Equity can be sold off easily. The sale of assets in whole or part is a very difficult task and

sensitive in EMCs where capital markets are less developed or nonexistent (Jones, Leroy, Tandon, Vogelsand 1991).

SOE. State Owned Enterprise

Transaction costs. Any activity which is engaged in to satisfy each party to an exchange that the value given and received is in accord with his expectations. They are the costs of carrying out a transaction of the opportunity costs incurred when an efficiency-enhancing transaction is not realized.

Unbundling. In reference to a sector or enterprise, segmentation or disaggregation of constituent activities into separate parts. Vertical unbundling refers to the separation of formerly integrated activities, as in the separation of power, production, transmission, and distribution activities. Horizontal unbundling refers to the splitting up of a sector segment into multiple independent entities (for example, competing power generators or separate regional distribution companies). The term also refers to the separation of infrastructure services from the underlying infrastructure, as in the separation of responsibility between of various attributes of property rights (for example, shares can be unbundled into voting rights and claim on cash flow).

Appendix B

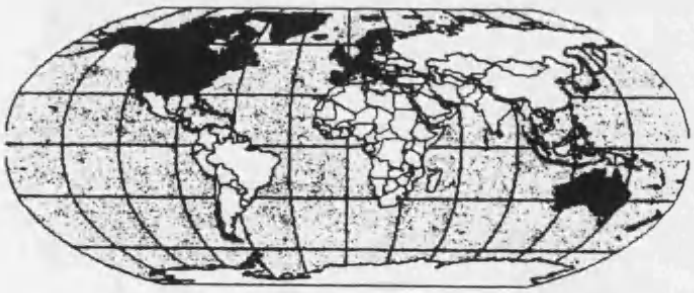
Regional and Economic Classifications

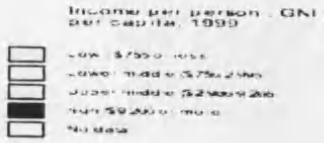
Regional Groupings of the 42 Study Countries

LAC	ECA	APAC	MENA	SA	SSU
Argentina	Bulgaria	China	Egypt	India	Cote d'Ivoire
Bolivia	Croatia	Indonesia	Morocco	Pakistan	Ghana
Brazil	Czech	Malaysia	Turkey	Sri Lanka	Kenya
Chile	Estonia	Philippines	Tunisia		Mozambique
Colombia	Hungary	Thailand			Nigeria
Jamaica	Lithuania				South Africa
Mexico	Macedonia				Tanzania
Nicaragua	Poland				Zambia
Panama	Romania				Uganda
Peru	Russia				
Venezuela					

Economic Classifications

Low, Middle, and High Income Countries





Classification of economies

For operational and analytical purposes, the World Bank's main criterion for classifying economies is gross national income (GNI) per capita. In previous editions of our publications, this term was referred to as gross national product, or GNI. Based on its GNI per capita, every economy is classified as low income, middle income (subdivided into lower middle and upper middle), or high income. Other analytical groups, based on geographic regions and levels of external debt, are also used.

Low-income and middle-income economies are sometimes referred to as developing economies. The use of the term is convenient; it is not intended to imply that all economies in the group are experiencing similar development or that other economies have reached a preferred or final stage of development. Classification by income does not necessarily reflect development status.

Definitions of groups

These tables classify all World Bank member countries (183), and all other economies with populations of more than 30,000 (207 total).

Income group: Economies are divided according to 2000 GNI per capita, calculated using the World Bank Atlas method. The groups are: *low income*, $755 or less; *lower middle income*, $756- $2,995; *upper middle income*, $2,996- $9,265; and *high income*, $9,266 or more.

Indebtedness: Standard World Bank definitions of severe and moderate indebtedness are used to classify economies in this table. *Severely indebted* means either of the two key ratios is above critical levels: present value of debt service to GNI (80 percent) and present value of debt service to exports (220 percent). *Moderately indebted* means either of the two key ratios exceeds 60 percent of, but does not reach, the critical levels. For economies that do not report detailed debt statistics to the World Bank Debtor Reporting System (DRS), present-value calculation is not possible. Instead, the following methodology is used to classify the non-DRS economies. *Severely indebted* means three of four key ratios (averaged over 1997-99) are above critical levels: debt to GNI (50 percent); debt to exports (275 percent); debt service to exports (30 percent); and interest to exports (20 percent). *Moderately indebted* means three of the four key ratios exceed 60 percent of, but do not reach, the critical levels. All other classified low- and middle-income economies are listed as *less-indebted*.

East Asia and Pacific (developing only: 23)

American Samoa
Cambodia
China
Fiji
Indonesia
Kiribati
Korea, Dem. Rep.
Korea, Rep.
Lao PDR
Malaysia
Marshall Islands
Micronesia, Fed. Sts
Mongolia
Myanmar
Palau
Papua New Guinea
Philippines
Samoa
Solomon Islands
Thailand
Tonga
Vanuatu
Vietnam

Europe and Central Asia (developing only: 28)

Albania
Armenia
Azerbaijan
Hungary
Isle of Man
Kazakhstan
Russian Federation
Slovak Republic
Tajikistan

Belarus	Kyrgyz Republic	Turkey
Bosnia and Herzegovina	Latvia	Turkmenistan
Bulgaria	Lithuania	Ukraine
Croatia	Macedonia, FYR	Uzbekistan
Czech Republic	Moldova	Yugoslavia, Fed. Rep.
Estonia	Poland	
Georgia	Romania	

Latin America and the Caribbean (developing only: 32)

Antigua and Barbuda	Ecuador	Paraguay
Argentina	El Salvador	Peru
Belize	Grenada	Puerto Rico
Bolivia	Guatemala	St. Kitts and Nevis
Brazil	Guyana	St. Lucia
Chile	Haiti	St. Vincent and the Grenadines
Colombia	Honduras	Suriname
Costa Rica	Jamaica	Trinidad and Tobago
Cuba	Mexico	Uruguay
Dominica	Nicaragua	Venezuela, RB
Dominican Republic	Panama	

Middle East and North Africa (developing only: 16)

Algeria	Jordan	Syrian Arab Republic
Bahrain	Lebanon	Tunisia
Djibouti	Libya	West Bank and Gaza
Egypt, Arab Rep.	Morocco	Yemen, Rep.
Iran, Islamic Rep.	Oman	
Iraq	Saudi Arabia	

South Asia (8)

Afghanistan	India	Pakistan
Bangladesh	Maldives	Sri Lanka
Bhutan	Nepal	

Sub-Saharan Africa (developing only: 48)

Angola	Gabon	Niger
Benin	Gambia, The	Nigeria
Botswana	Ghana	Rwanda
Burkina Faso	Guinea	Sao Tome and Principe
Burundi	Guinea-Bissau	Senegal
Cameroon	Kenya	Seychelles
Cape Verde	Lesotho	Sierra Leone

Central African Republic	Liberia	Somalia
Chad	Madagascar	South Africa
Comoros	Malawi	Sudan
Congo, Dem. Rep.	Mali	Swaziland
Congo, Rep	Mauritania	Tanzania
Cote d'Ivoire	Mauritius	Togo
Equatorial Guinea	Mayotte	Uganda
Eritrea	Mozambique	Zambia
Ethiopia	Namibia	Zimbabwe

Low-income economies (63)

Afghanistan	Ghana	Nicaragua
Angola	Guinea	Niger
Armenia	Guinea-Bissau	Nigeria
Azerbaijan	Haiti	Pakistan
Bangladesh	India	Rwanda
Benin	Indonesia	Sao Tome and Principe
Bhutan	Kenya	Senegal
Burkina Faso	Korea, Dem Rep.	Sierra Leone
Burundi	Kyrgyz Republic	Solomon Islands
Cambodia	Lao PDR	Somalia
Cameroon	Lesotho	Sudan
Central African Republic	Liberia	Tajikistan
Chad	Madagascar	Tanzania
Comoros	Malawi	Togo
Congo, Dem. Rep	Mali	Uganda
Congo, Rep.	Mauritania	Ukraine
Cote d'Ivoire	Moldova	Uzbekistan
Eritrea	Mongolia	Vietnam
Ethiopia	Mozambique	Yemen, Rep.
Gambia, The	Myanmar	Zambia
Georgia	Nepal	Zimbabwe

Lower-middle-income economies (54)

Albania	Guatemala	Paraguay
Algeria	Guyana	Peru
Belarus	Honduras	Philippines
Belize	Iran, Islamic Rep.	Romania
Bolivia	Iraq	Russian Federation
Bosnia and Herzegovina	Jamaica	Samoa
Bulgaria	Jordan	Sri Lanka
Cape Verde	Kazakhstan	St. Vincent and the Grenadines
China	Kiribati	Suriname
Colombia	Latvia	Swaziland
Cuba	Lithuania	Syrian Arab Republic

Djibouti	Macedonia, FYR	Thailand
Dominican Republic	Maldives	Tonga
Ecuador	Marshall Islands	Tunisia
Egypt, Arab Rep.	Micronesia, Fed. Sts.	Turkmenistan
El Salvador	Morocco	Vanuatu
Equatorial Guinea	Namibia	West Bank and Gaza
Fiji	Papua New Guinea	Yugoslavia, Fed. Rep.

Upper-middle-income economies (38)

American Samoa	Grenada	Poland
Antigua and Barbuda	Hungary	Puerto Rico
Argentina	Isle of Man	Saudi Arabia
Bahrain	Korea, Rep.	Seychelles
Botswana	Lebanon	Slovak Republic
Brazil	Libya	South Africa
Chile	Malaysia	St. Kitts and Nevis
Costa Rica	Mauritius	St. Lucia
Croatia	Mayotte	Trinidad and Tobago
Czech Republic	Mexico	Turkey
Dominica	Oman	Uruguay
Estonia	Palau	Venezuela, RB
Gabon	Panama	

High-income economies (52)

Andorra	Germany	New Caledonia
Aruba	Greece	New Zealand
Australia	Greenland	Northern Mariana Islands
Austria	Guam	Norway
Bahamas, The	Hong Kong, China	Portugal
Barbados	Iceland	Qatar
Belgium	Ireland	San Marino
Bermuda	Israel	Singapore
Brunei	Italy	Slovenia
Canada	Japan	Spain
Cayman Islands	Kuwait	Sweden
Channel Islands	Liechtenstein	Switzerland
Cyprus	Luxembourg	United Arab Emirates
Denmark	Macao, China	United Kingdom
Faeroe Islands	Malta	United States
Finland	Monaco	Virgin Islands (U.S.)
France	Netherlands	
French Polynesia	Netherlands Antilles	

High-income OECD members (23)

Australia	Greece	Norway
Austria	Iceland	Portugal
Belgium	Ireland	Spain
Canada	Italy	Sweden
Denmark	Japan	Switzerland
Finland	Luxembourg	United Kingdom
France	Netherlands	United States
Germany	New Zealand	

Severely indebted (46)

Afghanistan	Ethiopia	Nicaragua
Angola	Gabon	Niger
Argentina	Guinea	Nigeria
Benin	Guinea-Bissau	Pakistan
Bolivia	Guyana	Peru
Bosnia and Herzegovina	Indonesia	Rwanda
Brazil	Iraq	Sao Tome and Principe
Bulgaria	Jordan	Sierra Leone
Burundi	Kyrgyz Republic	Somalia
Cameroon	Lao PDR	Sudan
Central African Republic	Liberia	Syrian Arab Republic
Comoros	Madagascar	Tanzania
Congo, Dem. Rep.	Malawi	Uganda
Congo, Rep.	Mali	Zambia
Cote d'Ivoire	Mauritania	
Cuba	Myanmar	

Moderately indebted (43)

Algeria	Honduras	Samoa
Armenia	Hungary	Senegal
Bangladesh	Jamaica	St. Vincent and the Grenadines
Belize	Kenya	Thailand
Burkina Faso	Lebanon	Togo
Cambodia	Malaysia	Tunisia
Chad	Mauritius	Turkey
Chile	Moldova	Turkmenistan
Colombia	Mongolia	Uruguay
Ecuador	Morocco	Venezuela, RB
Estonia	Mozambique	Vietnam
Gambia, The	Panama	Yemen, Rep.
Georgia	Papua New Guinea	Zimbabwe
Ghana	Philippines	
Haiti	Russian Federation	

Less indebted (57)

Albania	Fiji	Paraguay
Antigua and Barbuda	Grenada	Poland
Azerbaijan	Guatemala	Romania
Bahrain	India	Saudi Arabia
Belarus	Iran, Islamic Rep.	Seychelles
Bhutan	Kazakhstan	Slovak Republic
Botswana	Kiribati	Solomon Islands
Cape Verde	Korea, Dem. Rep.	South Africa
China	Korea, Rep.	Sri Lanka
Costa Rica	Latvia	St. Kitts and Nevis
Croatia	Lesotho	St. Lucia
Czech Republic	Libya	Suriname
Djibouti	Lithuania	Swaziland
Dominica	Macedonia, FYR	Tajikistan
Dominican Republic	Maldives	Tonga
Egypt, Arab Rep.	Mexico	Trinidad and Tobago
El Salvador	Namibia	Ukraine
Equatorial Guinea	Nepal	Vanuatu
Eritrea	Oman	Yugoslavia, Fed. Rep.

Not classified by indebtedness (61)

American Samoa	Greenland	New Zealand
Andorra	Guam	Northern Mariana Islands
Aruba	Hong Kong, China	Norway
Australia	Iceland	Palau
Austria	Ireland	Portugal
Bahamas, The	Isle of Man	Puerto Rico
Barbados	Israel	Qatar
Belgium	Italy	San Marino
Bermuda	Japan	Singapore
Brunei	Kuwait	Slovenia
Canada	Liechtenstein	Spain
Cayman Islands	Luxembourg	Sweden
Channel Islands	Macao, China	Switzerland
Cyprus	Malta	United Arab Emirates
Denmark	Marshall Islands	United Kingdom
Faeroe Islands	Mayotte	United States
Finland	Micronesia, Fed. Sts.	Uzbekistan
France	Monaco	Virgin Islands (U.S.)
French Polynesia	Netherlands	West Bank and Gaza
Germany	Netherlands Antilles	
Greece	New Caledonia	

Appendix C
External Debt Levels

	Total external debt		Long-term debt		Public and publicly guaranteed debt				Private nonguaranteed external debt		Use of IMF credit	
					Total		IBRD loans and IDA credits					
	$ millions		$ millions		$ millions		$ millions		$ millions		$ millions	
	1990	1999	1990	1999	1990	1999	1990	1999	1990	1999	1990	1999
1 Argentina	62,232	147,880	48,676	111,887	46,876	84,568	2,609	8,314	1,800	27,320	3,083	4,478
2 Bolivia	4,275	6,157	3,864	4,508	3,687	3,864	587	1,110	177	643	257	247
3 Brazil	119,877	244,673	94,340	206,326	87,669	95,233	8,427	6,822	6,671	111,093	1,821	8,827
4 Bulgaria	10,865	9,872	9,809	8,246	9,809	7,602	0	829	0	644	0	1,250
5 Chile	19,226	37,762	14,687	32,269	10,425	5,655	1,874	885	4,263	26,614	1,156	0
6 China	55,301	154,223	45,515	136,541	45,515	108,163	5,881	19,308	0	28,378	469	0
7 Colombia	17,222	34,538	15,784	30,572	14,671	19,434	3,874	1,968	1,113	11,139	0	0
8 Côte d'Ivoire	17,251	13,170	13,223	11,295	10,665	9,699	1,920	2,068	2,558	1,596	431	620
9 Croatia	..	9,443	..	8,555	..	5,443	..	387	..	3,112	..	197
10 Czech Republic	6,383	22,582	3,983	15,317	3,983	13,440	0	324	0	1,878	0	0
11 Egypt, Arab Rep.	32,949	30,404	28,372	26,110	27,372	25,998	2,401	2,034	1,000	112	125	0
12 Estonia	..	2,879	..	1,612	..	206	..	88	..	1,407	..	25
13 Ghana	3,881	6,928	2,816	5,907	2,783	5,647	1,423	3,117	33	260	745	310
14 Hungary	21,202	29,042	17,931	25,499	17,931	16,064	1,512	654	0	9,436	330	0
15 India	83,717	94,393	72,550	90,324	71,062	82,380	20,996	26,746	1,488	7,944	2,623	26
16 Indonesia	69,872	150,096	58,242	119,819	47,982	72,554	10,385	12,106	10,261	47,265	494	10,248
17 Jamaica	4,674	3,913	3,970	3,071	3,937	2,905	672	393	34	166	357	83
18 Kenya	7,058	6,562	5,642	5,604	4,762	5,385	2,056	2,311	880	220	482	132
19 Lithuania	..	3,584	..	2,806	..	1,892	..	200	..	915	..	230
20 Macedonia, FYR	..	1,433	..	1,264	..	1,135	..	333	..	129	..	102
21 Malaysia	15,328	45,939	13,422	38,390	11,592	18,929	1,102	900	1,830	19,460	0	0
22 Mexico	104,442	166,960	81,809	138,424	75,974	87,531	11,030	11,027	5,835	50,893	6,551	4,473
23 Morocco	24,458	19,060	23,301	18,877	23,101	17,284	3,138	3,221	200	1,593	760	0
24 Mozambique	4,650	6,959	4,231	6,372	4,211	4,625	268	702	19	1,747	74	200
25 Nicaragua	10,707	6,986	8,281	5,905	8,281	5,799	299	607	0	106	0	155
26 Nigeria	33,439	29,358	31,935	22,673	31,545	22,423	3,321	2,613	391	250	0	0
27 Pakistan	20,663	34,269	16,643	30,736	16,506	28,594	3,922	7,220	138	2,221	836	1,704
28 Panama	6,678	6,837	3,988	6,245	3,988	5,678	462	288	0	567	272	149
29 Peru	20,064	32,284	13,959	25,194	13,629	20,709	1,188	2,417	330	4,485	755	735
30 Philippines	30,580	52,022	25,241	44,454	24,040	33,568	4,044	4,246	1,201	10,886	912	1,822
31 Poland	49,366	54,268	39,263	48,325	39,263	33,151	55	2,185	0	15,174	509	0
32 Romania	1,140	9,367	230	7,968	223	5,985	0	1,662	7	1,984	0	458
33 Russian Federation	59,340	173,940	47,540	142,958	47,540	120,375	0	6,707	0	22,583	0	15,238
34 South Africa	..	24,158	..	10,378	..	9,148	0	1	..	1,230	0	0
35 Sri Lanka	5,863	9,472	5,048	8,268	4,947	8,182	946	1,671	102	86	410	268
36 Tanzania	6,451	7,967	5,793	6,628	5,781	6,595	1,493	2,610	12	32	140	312
37 Thailand	28,165	96,335	19,842	69,486	12,531	31,011	2,530	2,816	7,311	38,475	1	3,431
38 Tunisia	7,690	11,872	6,880	10,259	6,662	9,487	1,406	1,364	218	772	176	76
39 Turkey	49,424	101,796	39,924	77,433	38,870	50,095	6,429	3,009	1,054	27,338	0	890
40 Uganda	2,583	4,077	2,161	3,564	2,161	3,564	969	2,043	0	0	282	372
41 Venezuela, RB	33,170	35,852	28,159	32,842	24,509	25,216	974	1,130	3,650	7,627	3,012	741
42 Zambia	6,916	5,853	4,554	4,571	4,552	4,498	813	1,736	2	73	949	1,171

Source: World Bank Debt Tables, 2001.

Appendix D

Cross-Sectional and Time-Series Data Tables[1]

PROCEEDS FROM PRIVATIZATION, 1990-1999 (US$ MILLIONS)

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Argentina	7,559.6	2,840.6	5,741.5	4,670.1	893.6	1,207.6	642.2	4,365.9	510.4	16,156.5
Bolivia	0.0	0.0	8.7	13.0	0.0	788.6	34.0	39.9	9.9	151.3
Brazil	44.0	1,633.4	2,400.7	2,620.6	2,103.5	991.5	5,770.2	18,737.4	32,426.6	2,879.8
Bulgaria	0.0	0.0	0.0	44.8	146.7	110.8	48.0	527.4	569.0	1,752.3
Chile	98.0	364.3	8.0	105.8	127.6	13.1	187.0	0.0	181.4	1,053.2
China	0.0	10.9	1,262.2	2,849.2	2,226.1	648.7	918.5	9,120.4	611.0	2,946.1
Colombia	0.0	168.3	5.4	390.8	170.0	0.0	1,850.9	2,876.0	518.1	0.0
Cote d'Ivoire	0.0	2.0	10.1	5.3	18.6	74.0	103.3	263.1	93.7	27.3
Croatia	0.0	0.0	44.8	24.1	13.0	3.0	161.4	0.0	222.0	850.0
Czech	22.0	527.0	1,359.8	645.1	7.0	1,645.0	0.0	71.5	180.7	1,175.0
Egypt	0.0	0.0	0.0	0.0	393.2	261.9	0.0	855.1	538.7	856.5
Estonia	0.0	0.0	38.0	25.9	107.9	78.6	39.9	177.0	43.0	267.9
Ghana	10.3	3.0	15.2	27.5	475.9	79.6	185.6	67.6	20.7	3.0
Hungary	483.2	797.5	779.2	1,654.8	1,506.6	3,987.6	945.3	2,139.0	341.6	1,364.1
India	0.0	931.0	1,097.7	861.3	1,505.0	810.0	495.0	1,373.1	52.2	1,858.1
Indonesia	0.0	190.4	13.9	31.1	1,747.6	2,031.2	1,007.6	141.0	122.1	849.9
Jamaica	49.0	83.2	30.4	78.4	75.0	1.1	68.4	0.0	0.0	0.0
Kenya	12.0	0.5	11.5	10.0	18.9	13.0	137.1	24.1	29.6	61.6
Lithuania	0.0	0.0	0.7	21.5	41.4	43.6	783.6	9.0	582.5	53.3
Macedonia	258.2	281.5	0.0	0.0	24.9	12.4	0.0	24.5	19.8	58.0
Malaysia	375.2	387.4	2,883.4	2,148.4	798.0	2,518.9	214.3	704.0	0.0	130.0
Mexico	3.0	11,289.4	6,923.8	2,131.5	766.3	167.0	1,526.1	4,496.2	998.7	291.0
Morocco	0.0	0.0	0.0	273.4	346.6	239.7	270.6	716.4	92.2	1,163.3
Mozambique	3.5	4.7	9.3	5.7	1.7	26.0	37.7	21.0	28.6	0.0
Nicaragua	1.1	31.5	11.2	66.1	16.4	4.0	0.0	0.0	0.0	0.0
Nigeria	15.9	35.3	114.1	541.0	23.9	0.0	0.0	0.0	0.0	0.0
Pakistan	11.0	62.7	342.9	16.9	1,106.1	36.5	316.7	58.2	41.3	0.0
Panama	0.6	2.0	16.8	20.7	59.7	0.0	72.0	652.0	301.8	301.7
Peru	0.0	2.7	212.4	126.6	2,840.1	1,276.3	1,751.4	1,158.9	480.0	286.0
Philippines	0.0	243.8	754.0	1,637.6	494.0	207.5	21.7	371.4	0.0	230.0
Poland	62.2	337.6	240.2	733.4	641.3	979.6	604.9	2,246.3	2,436.1	3,890.3
Romania	0.0	0.0	2.6	51.2	4.4	130.0	174.0	404.5	1,006.0	93.0
Russia	0.0	0.0	0.0	0.0	0.0	1,001.6	0.0	0.0	909.0	761.0
South Africa	0.0	1,073.3	0.0	0.0	0.0	0.0	122.0	1,286.6	247.3	235.0
Sri Lanka	18.3	2.1	105.5	52.1	42.2	65.4	77.1	360.6	80.6	0.6
Tanzania	0.0	0.0	2.7	26.8	4.9	76.7	13.4	16.3	110.8	20.7
Thailand	0.0	0.0	237.5	471.0	241.8	0.0	290.9	47.8	353.0	1,343.8
Tunisia	1.8	16.8	60.4	0.0	0.0	32.5	35.9	2.8	364.4	8.4
Turkey	436.5	212.2	780.2	482.6	354.3	571.8	297.0	465.5	1,016.3	38.0
Uganda	0.0	0.0	11.8	19.1	23.6	46.7	30.3	20.0	14.8	8.1
Venezuela	9.7	2,277.8	140.2	35.5	7.8	38.8	2,017.0	1,387.3	112.4	45.6
Zambia	0.0	0.0	0.0	2.5	13.8	69.1	29.8	302.0	408.8	0.0

[1] All tables from World Bank data tables, 2001.

Privatization and Debt Summaries

COUNTRY	PROCEEDS FROM PRIVATISATION, 1990-1999	FIRST FIVE YEAR TOTAL 90-94	SECOND FIVE YEAR TOTAL 95-99	TOTAL EXTERNAL DEBT, 1999	AS A % OF GNI, 1999
Argentina	44,588.0	21,705.4	22,882.6	147,880	9.3
Bolivia	1,045.4	21.7	1,023.7	6,157	6.1
Brazil	69,607.7	8,802.2	60,805.5	244,673	9.2
Bulgaria	3,199.0	191.5	3,007.5	9,872	9.3
Chile	2,138.4	703.7	1,434.7	37,762	7.7
China	20,593.2	6,348.4	14,244.8	154,223	2.1
Colombia	5,979.5	734.5	5,245.0	34,538	7.9
Cote d'Ivoire	597.4	36.0	561.4	13,170	13.9
Croatia	1,318.3	81.9	1,236.4	9,443	8.5
Czech Republic	5,633.1	2,560.9	3,072.2	22,582	6.9
Egypt, Arab Rep.	2,905.4	393.2	2,512.2	30,404	1.9
Estonia	778.2	171.8	606.4	2,879	10.5
Ghana	888.4	531.9	356.5	6,928	6.9
Hungary	13,998.9	5,221.3	8,777.6	29,042	16.1
India	8,983.4	4,395.0	4,588.4	94,393	2.3
Indonesia	6,134.8	1,983.0	4,151.8	150,096	13.5
Jamaica	385.5	316.0	69.5	3,913	11.2
Kenya	318.3	52.9	265.4	6,562	6.8
Lithuania	1,535.6	63.6	1,472.0	3,584	2.7
Macedonia, FYR	679.3	564.6	114.7	1,433	13.4
Malaysia	10,159.6	6,592.4	3,567.2	45,939	6.4
Mexico	28,593.0	21,114.0	7,479.0	166,960	8.5
Morocco	3,102.2	620.0	2,482.2	19,060	9.1
Mozambique	138.2	24.9	113.3	6,959	3.3
Nicaragua	130.3	126.3	4.0	6,986	9.1
Nigeria	730.2	730.2	0.0	29,358	2.9
Pakistan	1,992.3	1,539.6	452.7	34,269	4.8
Panama	1,427.3	99.8	1,327.5	6,837	8.3
Peru	8,134.4	3,181.8	4,952.5	32,284	5.8
Philippines	3,960.0	3,129.4	830.6	52,022	8.4
Poland	12,171.9	2,014.7	10,157.2	54,268	5.4
Romania	1,865.7	58.2	1,807.5	9,367	9.3
Russian Federation	2,671.6	0.0	2,671.6	173,940	3.1
South Africa	2,964.2	1,073.3	1,890.9	24,158	3.8
Sri Lanka	804.5	220.2	584.3	9,472	3.4
Tanzania	272.3	34.4	237.9	7,967	2.2
Thailand	2,985.8	950.3	2,035.5	96,335	13.6
Tunisia	523.0	79.0	444.0	11,872	7.6
Turkey	4,654.4	2,265.8	2,388.6	101,796	7.4
Uganda	174.4	54.5	119.9	4,077	2.9
Venezuela, RB	6,072.0	2,471.0	3,601.0	35,852	5.6
Zambia	826.0	16.3	809.7	5,853	14.6

Balance of payments current account

		Goods and services				Current account balance	
		Exports $ millions		Imports $ millions		$ millions	
		1990	1999	1990	1999	1990	1999
1	Argentina	14,800	27,747	6,846	32,589	4,552	-12,312
2	Bolivia	977	1,311	1,086	1,989	-199	-556
3	Brazil	35,170	55,746	28,184	63,648	-3,823	-25,073
4	Bulgaria	6,950	5,793	8,027	6,558	-1,710	-685
5	Chile	10,221	19,406	9,166	18,058	-485	-60
6	China	57,374	218,494	46,706	189,797	11,997	15,667
7	Colombia	8,679	13,865	6,858	13,351	542	-61
8	Côte d'Ivoire	3,503	5,346	3,445	4,137	-1,214	38
9	Croatia	..	8,118	..	9,791	..	-1,522
10	Czech Republic	..	33,188	..	33,989	..	-1,032
11	Egypt, Arab Rep.	9,151	13,537	13,710	21,109	-634	-1,708
12	Estonia	*664*	3,943	*711*	4,248	*36*	-295
13	Ghana	983	2,584	1,506	3,839	-223	-766
14	Hungary	12,035	27,496	11,017	28,302	379	-2,101
15	India	23,028	54,047	31,485	67,250	-8,145	-3,699
16	Indonesia	29,295	55,821	27,511	42,151	-2,988	5,785
17	Jamaica	2,217	3,356	2,390	3,928	-312	-256
18	Kenya	2,228	2,653	2,705	3,153	-527	11
19	Lithuania	..	4,238	..	5,337	..	-1,194
20	Macedonia, FYR	..	1,441	..	1,926	..	-109
21	Malaysia	32,665	95,971	31,765	76,140	-870	12,606
22	Mexico	48,805	148,125	51,915	156,268	-7,451	-14,166
23	Morocco	6,239	10,624	7,783	11,960	-196	-167
24	Mozambique	229	586	996	1,638	-415	-429
25	Nicaragua	392	839	682	2,011	-305	-587
26	Nigeria	14,550	13,855	6,909	12,063	4,988	506
27	Pakistan	6,217	8,838	9,351	11,688	-1,352	-2,187
28	Panama	4,438	6,888	4,193	7,700	209	-1,333
29	Peru	4,120	7,636	4,087	8,853	-1,419	-1,822
30	Philippines	11,430	39,012	13,967	36,767	-2,695	7,910
31	Poland	19,037	38,522	15,095	52,213	3,067	-12,487
32	Romania	6,380	9,868	9,901	11,380	-3,254	-1,297
33	Russian Federation	*53,883*	84,889	*48,915*	52,571	*468*	20,960
34	South Africa	27,119	33,320	21,017	30,005	2,065	-464
35	Sri Lanka	2,293	5,566	2,965	6,717	-298	-493
36	Tanzania	538	1,190	1,474	2,241	-559	-593
37	Thailand	29,229	71,410	35,870	56,345	-7,281	12,428
38	Tunisia	5,203	8,793	6,039	9,249	-463	-443
39	Turkey	21,042	45,724	25,652	48,726	-2,625	-1,364
40	Uganda	246	726	676	1,834	-429	-746
41	Venezuela, RB	18,806	22,122	9,451	16,985	8,279	3,689
42	Zambia	1,360	904	1,897	1,036	-594	..

Cross Sectional Data, 1999

Country	Cumulative Privatization 1990-1999	External Debt, 1999	GNI in 1999	Current Account 1999, +BP = 0	Country Credit Rating	Indebted Class	Stock Market Cap.	Central Gov. Deficit % of GDP	Reg 1	Reg 2	Reg 3	Reg 4	Reg 5	Reg 6
	PRIV	DEBT	GNI	CA	CRED	Ddclass	Dmcap	DEFIC	Dmena	Diac	Deca	Dapac	Dsa	Dsau
Argentina	44,588.00	147,880.00	276,097	12,312	55.0	1	1	-1.49	0	1	0	0	0	0
Bolivia	1,045.41	6,156.9	8,092	556	42.5	1	0	-2.32	0	1	0	0	0	0
Brazil	69,607.67	244,611.00	730,424	25,073	51.3	1	1	-7.34	0	1	0	0	0	0
Bulgaria	3,199.01	9,872.3	11,572	685	42.5	1	0	2.78	0	0	1	0	0	0
Chile	2,138.35	37,762.1	69,602	80	65.8	1	1	0.39	0	1	0	0	0	0
China	20,593.15	154,220.00	979,894	0	59.8	0	1	-2.23	0	0	0	1	0	0
Colombia	5,979.50	34,537.60	90,007	61	48.9	1	0	-5.12	0	1	0	0	0	0
Cote d'Ivoire	597.43	13,170.0	10,387	0	32.5	1	0	-1.27	0	0	0	0	0	1
Croatia	1,318.30	9,443.3	20,222	1,522	49.7	0	0	0.64	0	0	1	0	0	0
Czech	5,633.10	22,582.5	51,623	1,032	63.1	0	0	-1.65	0	0	1	0	0	0
Egypt	2,905.43	30,403.8	86,544	1,708	56.4	0	0	-2.02	1	0	0	0	0	0
Estonia	778.19	2,879.3	4,906	295	55.7	1	0	-0.06	0	0	1	0	0	0
Ghana	888.40	6,928.00	7,451	766	37.6	1	0	0.00	0	0	0	0	0	1
Hungary	13,998.90	29,042.2	46,751	2,101	65.2	1	0	-6.18	0	0	1	0	0	0
India	8,983.39	94,392.00	441,834	3,699	53.8	0	1	-4.80	0	0	0	0	1	0
Indonesia	6,134.82	150,096.30	125,043	0	38.5	1	0	-2.69	0	0	0	1	0	0
Jamaica	385.50	3,913.3	6,311	256	42.7	1	0	0.00	0	1	0	0	0	0
Kenya	318.30	6,561.5	10,696	0	37.6	1	0	-0.91	0	0	0	0	0	1
Lithuania	1,535.60	3,584.3	9,751	1,194	50.8	0	0	-0.43	0	0	1	0	0	0
Macedonia	679.30	1,433.2	3,348	109	37.4	0	0	0.00	0	0	1	0	0	0
Malaysia	10,159.60	45,939.4	76,944	0	61.1	1	1	2.92	0	0	0	1	0	0
Mexico	28,593.00	166,959.60	428,877	14,166	59.7	0	1	-1.45	0	1	0	0	0	0
Morocco	3,102.23	19,059.9	33,715	167	55.1	1	0	0.00	1	0	0	0	0	0
Mozambique	138.20	6,958.8	3,804	429	28.6	1	0	0.00	0	0	0	0	0	1
Nicaragua	130.30	6,986.3	2,012	587	26.3	1	0	0.00	0	1	0	0	0	0
Nigeria	730.20	29,357.7	31,600	0	32.1	1	0	0.00	0	0	0	0	0	1
Pakistan	1,992.30	34,269.3	62,915	2,187	32.0	1	0	-6.42	0	0	0	0	1	0
Panama	1,427.30	6,836.8	8,872	1,333	52.2	1	0	-0.69	0	1	0	0	0	0
Peru	8,134.35	32,283.5	53,705	1,822	39.1	1	0	-0.09	0	1	0	0	0	0
Philippines	396.00	52,021.5	77,967	0	52.8	1	1	-1.87	0	0	0	1	0	0
Poland	12,171.93	54,268.2	157,429	12,487	63.6	0	0	-1.00	0	0	1	0	0	0
Romania	1,865.70	9,366.7	33,034	1,297	36.6	0	0	-3.91	0	0	1	0	0	0
Russia	2,671.60	173,940.40	328,995	0	37.9	1	0	-5.30	0	0	1	0	0	0
South Africa	2,964.20	24,157.6	133,569	464	57.7	0	1	-2.62	0	0	0	0	0	1
Sri Lanka	804.46	9,472.5	15,578	493	39.8	0	0	-8.01	0	0	0	0	1	0
Tanzania	272.29	7,967.5	8,515	593	28.9	1	0	0.00	0	0	0	0	0	1
Thailand	2,985.79	96,335.00	121,051	0	59.5	1	0	-7.69	0	0	0	1	0	0
Tunisia	523.00	11,872.3	19,757	443	57.5	1	0	-0.40	1	0	0	0	0	0
Turkey	4,654.40	101,795.80	186,490	1,364	52.7	1	1	-8.40	1	0	0	0	0	0
Uganda	174.44	4,076.8	6,794	746	33.7	1	0	0.00	0	0	0	0	0	1
Venezuela	6,072.05	35,852.0	87,313	0	43.8	1	0	-3.67	0	1	0	0	0	0
Zambia	826.00	5,852.8	3,222	0	27.0	1	0	0.00	0	0	0	0	0	1

External Debt Management

	% of GNI		% of exports of goods and services		% of central government current revenue		% of total debt	
	1990	1999	1990	1999	1990	1999	1990	1999
Argentina	4.6	9.3	37.0	75.9	32.5	..	16.8	21.3
Bolivia	8.3	6.1	38.6	32.0	41.3	17.3	3.6	22.8
Brazil	1.8	9.2	22.2	110.9	3.9	..	19.8	12.1
Bulgaria	7.2	9.3	19.4	19.1	12.9	14.5	9.7	3.8
Chile	9.7	7.7	25.9	25.4	25.6	5.1	17.6	14.5
China	2.0	2.1	11.7	9.0	23.9	..	16.8	11.5
Colombia	10.2	7.9	40.9	42.9	61.2	44.7	8.4	11.5
Côte d'Ivoire	13.7	13.9	35.4	26.2	22.1	42.3	20.8	9.5
Croatia	..	8.5	..	19.4	..	7.7	..	7.3
Czech Republic	..	6.9	..	10.3	..	13.7	37.6	32.2
Egypt, Arab Rep.	7.3	1.9	22.3	9.0	16.3	..	13.5	14.1
Estonia	..	10.5	..	13.2	..	3.8	..	43.1
Ghana	6.4	6.9	36.9	19.9	26.2	..	8.2	10.3
Hungary	13.4	16.1	34.3	26.6	21.4	17.7	13.9	12.2
India	2.6	2.3	32.7	15.0	14.5	14.2	10.2	4.3
Indonesia	9.1	13.5	33.3	30.3	34.4	35.3	15.9	13.3
Jamaica	17.4	11.2	26.9	17.4	..	..	7.4	19.4
Kenya	9.8	6.8	35.4	26.7	26.6	..	13.2	12.6
Lithuania	..	2.7	..	6.3	..	6.0	..	15.3
Macedonia, FYR	..	13.4	..	29.9	..	..	..	4.7
Malaysia	10.3	6.4	12.6	4.8	31.4	..	12.4	16.4
Mexico	4.5	8.5	20.7	25.1	19.5	..	15.4	14.4
Morocco	7.2	9.1	21.5	24.3	21.3	..	1.7	1.0
Mozambique	3.3	3.3	26.2	20.0	..	..	7.4	5.6
Nicaragua	1.6	9.1	3.9	16.1	2.6	..	22.7	13.3
Nigeria	13.0	2.9	22.6	6.0	..	..	4.5	22.8
Pakistan	4.6	4.8	23.0	28.3	18.1	15.6	15.4	5.3
Panama	6.9	8.3	6.2	8.7	10.4	..	36.2	6.5
Peru	1.9	5.8	10.8	32.7	4.9	22.9	26.7	19.7
Philippines	8.1	8.4	27.0	14.3	39.5	41.7	14.5	11.0
Poland	1.7	5.4	4.9	20.4	..	4.3	19.4	11.0
Romania	0.0	9.3	0.3	31.3	0.0	..	79.8	10.0
Russian Federation	2.0	3.1	..	13.5	..	10.7	19.9	9.1
South Africa	..	3.8	..	13.9	..	8.5	..	57.0
Sri Lanka	4.8	3.4	13.7	7.9	16.7	14.4	6.9	10.0
Tanzania	4.4 c	2.2 c	32.9 c	15.6 c	..	..	8.0	12.9
Thailand	6.3	13.6	16.9	22.0	20.7	21.7	29.5	24.3
Tunisia	12.0	7.6	24.5	15.9	32.2	22.4	8.2	13.0
Turkey	4.9	7.4	29.4	26.2	30.9	18.1	19.2	23.1
Uganda	3.4	2.9	58.9	23.7	..	..	5.4	3.5
Venezuela, RB	10.6	5.6	23.2	23.2	36.2	23.3	6.0	6.3
Zambia	6.7	14.6	14.9	46.6	..	..	20.4	1.9

Total GNI 1999, Atlas method

Economy	(millions of US dollars)
7 China	979,894
8 Brazil	730,424
11 India	441,834
12 Mexico	428,877
16 Russian Federation	328,995
17 Argentina	276,097
22 Turkey	186,490
25 Poland	157,429
28 South Africa	133,569
31 Indonesia	125,043
32 Thailand	121,051
37 Colombia	90,007
38 Venezuela, RB	87,313
39 Egypt, Arab Rep.	86,544
41 Philippines	77,967
42 Malaysia	76,944
43 Chile	69,602
44 Pakistan	62,915
46 Peru	53,705
48 Czech Republic	51,623
51 Hungary	46,751
55 Morocco	33,715
56 Romania	33,034
57 Nigeria	31,600
64 Croatia	20,222
66 Tunisia	19,757
76 Sri Lanka	15,578
81 Bulgaria	11,572
83 Kenya	10,696
84 Cote d'Ivoire	10,387
85 Lithuania	9,751
86 Panama	8,872
90 Tanzania /c	8,515
94 Bolivia	8,092
97 Ghana	7,451
98 Uganda	6,794
101 Jamaica	6,311
112 Estonia	4,906
122 Mozambique	3,804
129 Macedonia, FYR	3,348
131 Zambia	3,222
147 Nicaragua	2,012

Time Series Data

Base Case	y1	x1	x2	x3		
	Year	PRIV	DEBT	GNI	CA	DEBTSQ
Argentina	1990	7,559.6	62,232.00	135,150.00	4,552.0	3,872,821,824
	1991	2,840.6	65,405.00	188,573.00	(647.0)	4,277,814,025
	1992	5,741.5	68,345.00	224,521.00	(5,714.7)	4,671,039,025
	1993	4,670.1	64,718.00	233,817.00	(8,157.9)	4,188,419,524
	1994	893.6	75,139.00	254,182.00	(11,158.3)	5,645,869,321
	1995	1,207.6	98,802.00	253,816.00	(5,190.7)	9,761,835,204
	1996	642.2	111,418.00	267,152.00	(6,842.5)	12,413,970,724
	1997	4,365.9	128,410.00	286,989.00	(12,328.4)	16,489,128,100
	1998	510.4	141,549.00	291,101.00	(14,603.3)	20,036,119,401
	1999	16,156.5	147,880.00	276,097.00	(12,312.4)	21,868,494,400
Bolivia	1990	0.0	4,275.0	4,626.5	(198.9)	18,275,625
	1991	0.0	4,061.3	5,100.8	(262.6)	16,494,158
	1992	8.7	4,234.7	5,315.3	(533.9)	17,932,684
	1993	13.0	4,306.9	5,523.7	(505.5)	18,549,388
	1994	0.0	4,876.6	5,793.5	(90.2)	23,781,228
	1995	788.6	5,272.0	6,468.0	(302.5)	27,793,984
	1996	34.0	5,191.3	7,191.1	(379.7)	26,949,596
	1997	39.9	5,232.9	7,706.3	(553.5)	27,383,242
	1998	9.9	6,460.4	8,354.6	(678.1)	41,736,768
	1999	151.3	6,156.9	8,122.2	(555.8)	37,907,418
Brazil	1990	44.0	119,800.00	452,000.0	(3,823.0)	14,352,040,000
	1991	1,633.4	120,900.00	398,000.0	(1,450.0)	14,616,810,000
	1992	2,400.7	128,710.00	383,000.0	6,039.0	16,566,264,100
	1993	2,620.6	143,400.00	427,100.0	28.0	20,563,560,000
	1994	2,103.5	151,222.00	537,300.0	(1,153.0)	22,868,093,284
	1995	991.5	159,011.00	693,400.0	(18,136.0)	25,284,498,121
	1996	5,770.2	181,345.00	762,100.0	(23,248.0)	32,886,009,025
	1997	18,737.4	198,500.00	787,000.0	(30,491.0)	39,402,250,000
	1998	32,426.6	244,800.00	755,100.0	(35,829.0)	59,927,040,000
	1999	2,879.8	244,611.00	729,424.0	(25,873.0)	59,834,541,321
Bulgaria	1990	0.0	10,864.6	19,082.6	(1,710.0)	118,039,533
	1991	0.0	11,715.8	9,833.5	(76.9)	137,259,970
	1992	0.0	11,809.7	10,203.5	(359.9)	139,469,014
	1993	44.8	12,173.8	10,640.6	(1,098.8)	148,201,406
	1994	146.7	9,744.0	9,580.2	(31.8)	94,945,536
	1995	110.8	10,245.8	12,679.6	(25.8)	104,976,418
	1996	48.0	9,991.8	9,441.3	15.7	99,836,067
	1997	527.4	9,754.0	9,708.9	426.9	95,140,516
	1998	569.0	9,800.6	12,257.3	(61.8)	96,051,760
	1999	1,752.3	9,872.3	12,402.4	(684.7)	97,462,307
Chile	1990	98.0	19,225.8	28,563.0	(484.5)	369,631,386
	1991	364.3	17,946.9	32,690.0	(98.7)	322,091,220
	1992	8.0	19,133.7	39,960.0	(957.9)	366,098,476
	1993	105.8	20,636.9	42,767.0	(2,554.4)	425,881,642
	1994	127.6	24,728.4	48,367.0	(1,584.9)	611,493,767
	1995	13.1	25,562.2	62,427.0	(1,349.6)	653,426,069
	1996	187.0	27,403.9	65,767.0	(3,510.0)	750,973,735
	1997	0.0	31,443.1	72,562.0	(3,727.7)	988,668,538
	1998	181.4	36,321.0	70,856.0	(4,139.0)	1,319,215,041
	1999	1,053.2	37,762.1	65,609.0	(80.0)	1,425,976,196
China	1990	0.0	55,300.0	355,600.0	1,200.0	3,058,090,000

	1991	10.9	60,261.00	377,411.0	1,327.0	3,631,388,121
	1992	1,262.2	72,430.00	418,400.0	6,401.0	5,246,104,900
	1993	2,849.2	85,939.00	430,900.0	(11,611.0)	7,385,511,721
	1994	2,226.1	100,460.00	541,512.0	6,911.0	10,092,211,600
	1995	648.7	118,822.00	688,401.0	1,622.0	14,118,667,684
	1996	918.5	128,102.00	804,000.0	7,245.0	16,410,122,404
	1997	9,120.4	146,711.00	887,233.0	36,963.0	21,524,117,521
	1998	611.0	154.60	929,000.0	31,477.0	23,901
	1999	2,946.1	154,220.00	979,894.0	15,676.0	23,783,808,400
Colombia	1990	0.0	17,222.10	38,193.00	542.0	296,600,728
	1991	168.3	17,200.80	39,643.00	2,348.8	295,867,521
	1992	5.4	17,277.10	47,149.00	900.7	298,498,184
	1993	390.8	18,941.70	53,939.00	(2,102.4)	358,787,999
	1994	170.0	21,939.60	79,164.00	(3,675.0)	481,346,048
	1995	0.0	25,047.60	89,491.00	(4,596.0)	627,382,266
	1996	1,850.9	28,899.50	93,171.00	(4,753.0)	835,181,100
	1997	2,876.0	31,799.60	104,311.00	(5,864.0)	1,011,214,560
	1998	518.1	33,264.00	97,366.00	(5,209.0)	1,106,493,696
	1999	0.0	34,537.60	84,093.00	(61.0)	1,192,845,814
Cote d'Ivoire	1990	0.0	17,251.1	2,507.3	(1,214.2)	297,600,451
	1991	2.0	18,174.0	2,573.2	(1,074.1)	330,294,276
	1992	10.1	18,546.5	2,595.9	(1,012.7)	343,972,662
	1993	5.3	19,070.9	2,559.6	(891.7)	363,699,227
	1994	18.6	17,395.2	3,826.4	(13.8)	302,592,983
	1995	74.0	18,898.5	4,494.8	(492.4)	357,153,302
	1996	103.3	19,523.6	5,005.1	(164.8)	381,170,957
	1997	263.1	15,608.7	5,703.0	(128.0)	243,631,516
	1998	93.7	14,851.8	6,162.8	(211.5)	220,575,963
	1999	27.3	13,170.0	10,387.0	38.2	173,448,900
Croatia	1990	0.0	910.0	11,453.00	311.0	828,100
	1991	0.0	1,102.0	1,651.00	392.0	1,214,404
	1992	44.8	1,333.0	795.00	494.0	1,776,889
	1993	24.1	1,613.9	5,395.00	623.1	2,604,673
	1994	13.0	2,054.2	13,921.00	853.7	4,219,738
	1995	3.0	3,728.8	17,532.00	(1,441.7)	13,903,949
	1996	161.4	4,932.7	18,305.00	(1,091.4)	24,331,529
	1997	0.0	6,845.8	18,705.00	(2,324.9)	46,864,978
	1998	222.0	9,159.2	19,555.00	(1,530.8)	63,890,945
	1999	850.0	9,443.3	20,222.00	(1,522.3)	89,175,915
Czech	1993	645.1	9,156.0	34,880.00	466.3	83,832,336
	1994	7.0	10,680.8	41,070.00	(819.9)	114,079,489
	1995	1,645.0	16,217.6	51,930.00	(1,373.5)	263,010,550
	1996	0.0	20,190.5	57,199.00	(4,298.9)	407,656,290
	1997	71.5	23,627.0	51,855.00	(3,270.9)	558,235,129
	1998	180.7	24,006.7	54,725.00	(1,386.9)	576,321,645
	1999	1,175.0	22,582.5	52,372.00	(1,031.7)	509,969,306
Egypt	1990	0.0	32,949.0	42,065.00	(634.0)	1,085,636,601
	1991	0.0	32,564.1	36,490.00	3,820.5	1,060,420,609
	1992	0.0	31,066.5	41,915.00	2,669.9	965,127,422
	1993	0.0	30,508.7	47,000.00	2,295.1	930,780,776
	1994	393.2	32,314.0	51,432.00	409.9	1,044,194,596
	1995	261.9	33,266.2	60,300.00	385.9	1,106,640,062
	1996	0.0	31,299.5	68,189.00	(185.4)	979,658,700
	1997	855.1	29,849.6	76,572.00	118.9	890,998,620
	1998	538.7	31,965.3	83,925.00	(2,478.6)	1,021,780,404
	1999	856.5	30,403.8	90,144.00	(1,708.5)	924,391,054

Estonia	1992	38.0	5,840.0	4,172.9	36.2	34,105,600
	1993	25.9	1,539.0	3,888.5	21.6	2,368,521
	1994	107.9	1,861.0	3,887.6	(166.3)	3,463,321
	1995	78.6	2,864.0	4,792.5	(157.8)	8,202,496
	1996	39.9	1,533.6	4,372.8	(398.3)	2,351,929
	1997	177.0	2,561.6	4,597.9	(561.9)	6,561,795
	1998	43.0	2,924.8	5,119.5	(477.9)	8,554,455
	1999	267.9	2,879.3	5,129.7	(294.7)	8,290,368
Ghana	1990	10.3	3,880.90	5,773.0	(223.2)	15,061,385
	1991	3.0	4,380.20	6,477.0	(252.1)	19,186,152
	1992	15.2	4,508.10	6,306.0	(377.0)	20,322,966
	1993	27.5	4,886.60	5,854.0	(559.8)	23,878,860
	1994	475.9	5,469.20	5,329.0	(254.6)	29,912,149
	1995	79.6	5,935.80	6,324.0	(144.6)	35,233,722
	1996	185.6	6,439.50	6,844.0	(324.7)	41,467,160
	1997	67.6	6,346.30	6,812.0	(549.7)	40,275,524
	1998	20.7	6,883.40	7,337.0	(380.0)	47,381,196
	1999	3.0	6,928.00	7,633.0	(766.0)	47,997,184
Hungary	1990	483.2	21,201.5	31,606.0	378.6	449,503,602
	1991	797.5	22,630.8	32,073.0	403.2	512,153,109
	1992	779.2	22,028.1	35,993.0	351.9	485,237,190
	1993	1,654.8	24,363.6	37,410.0	(4,262.5)	593,585,005
	1994	1,506.6	28,274.9	40,103.0	(4,053.6)	799,469,970
	1995	3,987.6	31,590.2	42,875.0	(2,529.5)	997,940,736
	1996	945.3	27,207.8	43,708.0	(1,688.7)	740,264,381
	1997	2,139.0	24,496.2	44,303.0	(982.0)	600,063,814
	1998	341.6	28,310.0	45,177.0	(2,304.0)	801,456,100
	1999	1,364.1	29,042.2	46,806.0	(2,101.2)	843,449,381
India	1990	0.0	83,716.00	312,124.0	(8,144.6)	7,008,368,656
	1991	931.0	85,421.00	262,556.0	(427.6)	7,296,747,241
	1992	1,097.7	90,264.00	254,363.0	(3,116.2)	8,147,589,696
	1993	861.3	94,342.00	270,021.0	(786.1)	8,900,412,964
	1994	1,505.0	102,482.00	317,469.0	(3,745.0)	10,502,560,324
	1995	810.0	94,469.00	349,192.0	(6,726.0)	8,924,391,961
	1996	495.0	93,470.00	379,955.0	(5,578.0)	8,736,640,900
	1997	1,373.1	94,320.00	404,335.0	(5,145.0)	8,896,262,400
	1998	52.2	97,638.00	415,511.0	(3,449.0)	9,533,179,044
	1999	1,858.1	94,392.00	444,158.0	(3,698.6)	8,909,849,664
Indonesia	1990	0.0	69,871.00	109,208.000	(2,988.0)	4,881,956,641
	1991	190.4	79,547.00	122,572.000	(4,260.0)	6,327,725,209
	1992	13.9	88,002.00	132,937.000	(2,780.0)	7,744,352,004
	1993	31.1	89,171.00	151,992.000	(2,106.0)	7,951,467,241
	1994	1,747.6	107,823.00	172,149.000	(2,792.0)	11,625,799,329
	1995	2,031.2	124,398.00	196,187.000	(6,431.0)	15,474,862,404
	1996	1,007.6	128,941.00	221,276.000	(7,663.0)	16,625,781,481
	1997	141.0	136,173.00	209,439.000	(4,889.0)	18,543,085,929
	1998	122.1	150,883.90	93,444.000	4,096.0	22,765,951,279
	1999	849.9	150,096.30	125,043.000	5,785.0	22,528,899,274
Jamaica	1990	49.0	4,673.6	3,804.00	(312.1)	21,842,537
	1991	83.2	4,413.0	3,317.00	(240.1)	19,474,569
	1992	30.4	4,260.4	2,887.00	28.5	18,151,008
	1993	78.4	4,105.9	3,813.00	(184.0)	16,858,415
	1994	75.0	4,316.6	4,088.00	93.2	18,633,036
	1995	1.1	4,271.4	4,275.00	(74.1)	18,244,858
	1996	68.4	3,995.4	4,287.00	(111.6)	15,963,221
	1997	0.0	3,912.0	6,562.00	(310.6)	15,303,744

	1998	0.0	4,016.5	6,671.00	(302.4)	16,132,272
	1999	0.0	3,913.3	6,556.00	(255.7)	15,313,917
Kenya	1990	12.0	7,058.1	8,088.00	(527.1)	49,816,776
	1991	0.5	7,452.9	7,586.00	(213.3)	55,545,718
	1992	11.5	6,898.1	7,613.00	(180.2)	47,583,784
	1993	10.0	7,111.3	4,560.00	71.2	50,570,588
	1994	18.9	7,202.3	6,757.00	97.9	51,873,125
	1995	13.0	7,412.4	8,686.00	(400.4)	54,943,674
	1996	137.1	6,931.0	8,950.00	(73.5)	48,038,761
	1997	24.1	6,602.8	10,392.00	(377.3)	43,596,968
	1998	29.6	6,943.3	11,291.00	(362.9)	48,209,415
	1999	61.6	6,561.5	10,475.00	11.0	43,053,282
Lithuania	1993	21.5	332.8	6,118.1	(85.7)	110,756
	1994	41.4	502.7	5,840.8	(94.0)	252,707
	1995	43.6	769.5	6,430.9	(614.4)	592,130
	1996	783.6	1,258.2	7,801.3	(722.6)	1,583,067
	1997	9.0	2,405.4	9,386.7	(981.3)	5,785,949
	1998	582.5	2,755.7	10,492.0	(1,298.2)	7,593,882
	1999	53.3	3,584.3	10,376.0	(1,194.0)	12,847,206
Macedonia	1993	0.0	1,041.8	2,100.0	(230.0)	1,085,347
	1994	24.9	1,103.6	2,394.00	(240.0)	1,217,933
	1995	12.4	1,277.1	2,477.00	(250.0)	1,630,984
	1996	0.0	1,818.4	2,773.00	(288.1)	3,306,579
	1997	24.5	1,233.4	3,136.00	(275.5)	1,521,276
	1998	19.8	1,775.5	3,405.00	(311.7)	3,152,400
	1999	58.0	1,433.2	3,408.00	(109.3)	2,054,062
Malaysia	1990	375.2	15,328.4	42,152.00	(0.9)	234,959,847
	1991	387.4	17,079.8	46,661.00	(4.2)	291,719,568
	1992	2,883.4	20,017.9	56,008.00	(2.2)	400,716,320
	1993	2,148.4	26,148.5	63,683.00	(3.0)	683,744,052
	1994	798.0	30,335.9	70,894.00	(4.5)	920,266,829
	1995	2,518.9	34,342.6	84,688.00	(8.6)	1,179,414,175
	1996	214.3	39,673.3	96,160.00	(4.5)	1,573,970,733
	1997	704.0	47,228.2	94,802.00	(5.9)	2,230,502,875
	1998	0.0	44,769.2	68,580.00	9.5	2,004,281,269
	1999	130.0	45,939.4	73,542.00	12.6	2,110,428,472
Mexico	1990	3.0	104,442.00	254,083.0	(7.5)	10,908,131,364
	1991	11,289.4	114,067.50	305,842.0	(14.9)	13,011,394,556
	1992	6,923.8	112,314.70	354,014.0	(24.4)	12,614,591,836
	1993	2,131.5	131,726.30	391,766.0	(23.4)	17,351,818,112
	1994	766.3	140,193.30	407,763.0	(29.7)	19,654,161,365
	1995	167.0	166,873.70	272,877.0	(1.6)	27,846,831,752
	1996	1,526.1	157,495.90	318,398.0	(2.3)	24,804,958,517
	1997	4,496.2	148,695.60	388,301.0	(7.5)	22,110,381,459
	1998	998.7	159,777.70	402,832.0	(15.7)	25,528,913,417
	1999	291.0	166,959.60	428,877.0	(14.2)	27,875,508,032
Morocco	1990	0.0	24,458.4	24,835.00	(195.6)	598,213,331
	1991	0.0	21,865.5	26,721.00	(413.3)	478,100,090
	1992	0.0	22,060.6	27,393.00	(432.7)	486,670,072
	1993	273.4	21,459.1	25,593.00	(521.4)	460,492,973
	1994	346.6	22,157.9	29,180.00	(722.9)	490,972,532
	1995	239.7	22,665.4	31,668.00	(1,185.9)	513,720,357
	1996	270.6	21,851.1	35,330.00	35.0	477,470,571
	1997	716.4	20,161.6	32,239.00	(87.2)	406,490,115
	1998	92.2	20,490.7	34,634.00	(143.8)	419,868,786
	1999	1,163.3	19,059.9	34,024.00	(167.1)	363,279,788
Mozambique	1990	3.5	4,649.7	2,366.0	(415.3)	21,619,710

	1991	4.7	4,718.4	2,339.0	(344.3)	22,263,299
	1992	9.3	5,130.3	1,772.0	(352.3)	26,319,978
	1993	5.7	5,211.6	1,924.0	(446.3)	27,160,775
	1994	1.7	7,271.7	2,064.0	(467.2)	52,877,621
	1995	26.0	7,458.4	2,207.0	(444.7)	55,627,731
	1996	37.7	7,566.3	2,725.0	(420.5)	57,248,896
	1997	21.0	7,637.8	3,331.0	(295.6)	58,335,989
	1998	28.6	8,314.9	3,694.0	(429.3)	69,137,562
	1999	0.0	6,958.8	3,804.0	(429.0)	48,424,897
Nicaragua	1990	1.1	10,707.1	987.8	(305.2)	114,641,990
	1991	31.5	10,912.5	1,200.8	(264.2)	119,082,656
	1992	11.2	11,227.6	1,349.3	(769.0)	126,059,002
	1993	66.1	11,261.0	1,390.0	(604.3)	126,810,121
	1994	16.4	11,908.9	1,283.8	(651.8)	141,821,899
	1995	4.0	10,359.4	1,530.6	(484.0)	107,317,168
	1996	0.0	5,931.6	1,649.8	(438.3)	35,183,879
	1997	0.0	6,215.9	1,774.1	(534.7)	38,637,413
	1998	0.0	6,442.2	1,878.6	(490.5)	41,501,941
	1999	0.0	6,986.3	2,012.2	(587.1)	48,808,388
Nigeria	1990	15.9	33,438.9	25,584.0	4,988.2	1,118,160,033
	1991	35.3	33,527.2	24,857.0	1,202.6	1,124,073,140
	1992	114.1	29,018.7	29,760.0	2,267.8	842,084,950
	1993	541.0	30,735.6	19,006.0	(780.4)	944,677,107
	1994	23.9	33,092.3	21,310.0	(2,127.9)	1,095,100,319
	1995	0.0	34,092.5	25,888.0	(2,578.4)	1,162,298,556
	1996	0.0	31,406.6	33,068.0	3,506.9	986,374,524
	1997	0.0	28,454.9	33,993.0	551.6	809,681,334
	1998	0.0	30,314.9	29,169.0	(4,243.5)	918,993,162
	1999	0.0	29,357.7	31,631.0	505.7	861,874,549
Pakistan	1990	11.0	20,663.4	41,792.0	(1,352.0)	426,976,100
	1991	62.7	23,363.3	47,370.0	(1,368.0)	545,843,787
	1992	342.9	24,917.9	51,188.0	(896.2)	620,901,740
	1993	16.9	24,546.4	53,003.0	(3,327.0)	602,525,753
	1994	1,106.1	27,382.7	53,403.0	(1,650.0)	749,812,259
	1995	36.5	30,228.7	62,189.0	(2,163.0)	913,774,304
	1996	316.7	29,824.7	63,978.0	(4,343.0)	889,512,730
	1997	58.2	30,069.3	63,503.0	(3,560.0)	904,162,802
	1998	41.3	32,319.2	63,334.0	(1,702.0)	1,044,530,689
	1999	0.0	34,269.3	58,816.0	(2,187.0)	1,174,384,922
Panama	1990	0.6	6,678.4	5,024.1	209.1	44,601,027
	1991	2.0	6,840.9	5,421.3	(241.1)	46,797,913
	1992	16.8	6,486.0	6,202.0	(264.2)	42,068,196
	1993	20.7	6,957.9	6,959.3	(95.7)	48,412,372
	1994	59.7	7,128.8	7,504.7	15.8	50,819,789
	1995	0.0	6,274.8	7,532.8	(369.1)	39,373,115
	1996	72.0	6,068.7	7,827.3	(301.9)	36,829,120
	1997	652.0	6,021.6	8,245.9	(603.5)	36,259,667
	1998	301.8	6,406.9	8,820.2	(1,211.6)	41,048,368
	1999	301.7	6,836.8	8,872.2	(1,332.6)	46,741,834
Peru	1990	0.0	20,063.9	25,508.0	(1,419.0)	402,560,083
	1991	2.7	20,716.2	22,256.0	(1,500.0)	429,160,942
	1992	212.4	20,337.7	34,920.0	(2,087.0)	413,622,041
	1993	126.6	23,573.1	33,555.0	(2,287.0)	555,691,044
	1994	2,840.1	26,527.6	43,290.0	(2,555.3)	703,713,562
	1995	1,276.3	30,851.6	51,823.0	(4,116.8)	951,821,223
	1996	1,751.4	29,085.9	54,318.0	(3,429.0)	845,989,579
	1997	1,158.9	30,325.7	57,782.0	(3,056.0)	919,648,080

	1998	480.0	32,175.3	55,517.0	(3,639.0)	1,035,249,930
	1999	286.0	32,283.5	53,705.0	(1,822.0)	1,042,224,372
Philippines	1990	0.0	30,580.2	44,091.0	(2,695.0)	935,148,632
	1991	243.8	32,450.6	45,655.0	(1,034.0)	1,053,041,440
	1992	754.0	33,005.0	53,889.0	(1,000.0)	1,089,330,025
	1993	1,637.6	35,936.1	55,320.0	(3,016.0)	1,291,403,283
	1994	494.0	39,411.6	65,729.0	(2,950.0)	1,553,274,215
	1995	207.5	37,829.2	76,165.0	(1,980.0)	1,431,048,373
	1996	21.7	40,145.0	86,257.0	(3,953.0)	1,611,621,025
	1997	371.4	45,681.8	85,605.0	(4,351.0)	2,086,826,851
	1998	0.0	47,793.1	68,326.0	1,546.0	2,284,180,408
	1999	230.0	52,021.5	77,967.0	7,909.6	2,706,236,462
Poland	1990	62.2	49,366.3	55,619.0	3,067.0	2,437,031,576
	1991	337.6	53,420.5	73,630.0	(2,146.0)	2,853,749,820
	1992	240.2	48,494.6	82,702.0	(3,104.0)	2,351,726,229
	1993	733.4	45,176.4	84,701.0	(5,788.0)	2,040,907,117
	1994	641.3	42,552.9	98,990.0	954.0	1,810,749,298
	1995	979.6	44,263.2	108,893.0	854.0	1,959,230,874
	1996	604.9	43,473.1	129,672.0	(3,264.0)	1,889,910,424
	1997	2,246.3	40,401.1	147,694.0	(5,744.0)	1,632,248,881
	1998	2,436.1	55,494.0	156,984.0	(6,901.0)	3,079,584,036
	1999	3,890.3	54,268.2	154,156.0	(12,487.0)	2,945,037,531
Romania	1990	0.0	1,139.9	38,455.000	(3,254.0)	1,299,372
	1991	0.0	2,131.4	28,861.000	(1,012.0)	4,542,866
	1992	2.6	3,240.1	24,978.000	(1,506.0)	10,498,248
	1993	51.2	4,239.3	27,102.000	(1,174.0)	17,971,664
	1994	4.4	5,532.5	28,120.000	(428.0)	30,608,556
	1995	130.0	6,666.0	31,686.000	(1,774.0)	44,435,556
	1996	174.0	8,519.1	32,788.000	(2,571.0)	72,575,065
	1997	404.5	9,477.1	31,773.000	(2,137.0)	89,815,424
	1998	1,006.0	10,014.3	41,048.000	(2,918.0)	100,286,204
	1999	93.0	9,366.7	33,652.000	(1,297.0)	87,735,069
Russia	1990	0.0	59,339.60	577,909.0	300.0	3,521,188,128
	1991	0.0	67,772.40	540,620.0	400.0	4,593,098,202
	1992	0.0	78,651.90	421,488.0	467.0	6,186,121,374
	1993	0.0	112,440.40	383,903.0	2,675.0	12,642,843,552
	1994	0.0	122,325.20	321,093.0	6,556.0	14,963,454,555
	1995	1,001.6	121,722.40	332,098.0	5,595.0	14,816,342,662
	1996	0.0	126,621.30	411,384.0	10,284.0	16,032,953,614
	1997	0.0	127,664.90	418,764.0	1,552.0	16,298,326,692
	1998	909.0	177,710.10	265,929.0	945.0	31,580,879,642
	1999	761.0	173,940.40	328,995.0	2,096.0	30,255,262,752
South Africa	1990	0.0	11,968.0	107,542.0	2,065.4	143,233,024
	1991	1,073.3	13,883.0	117,034.0	2,259.7	192,737,689
	1992	0.0	16,105.0	127,586.0	1,966.7	259,371,025
	1993	0.0	18,681.0	127,743.0	1,502.2	348,979,761
	1994	0.0	21,671.0	133,355.0	113.9	469,632,241
	1995	0.0	25,358.0	148,238.0	(2,204.2)	643,028,164
	1996	122.0	26,050.0	140,727.0	(1,880.7)	678,602,500
	1997	1,286.6	25,221.0	145,155.0	(2,273.0)	636,098,841
	1998	247.3	24,711.5	130,944.0	(1,935.6)	610,658,232
	1999	235.0	24,157.6	133,569.0	(464.4)	583,589,638
Sri Lanka	1990	18.3	5,863.1	7,889.0	(298.3)	34,375,942
	1991	2.1	6,579.1	8,821.0	(594.8)	43,284,557
	1992	105.5	6,451.4	9,526.0	(450.7)	41,620,562
	1993	52.1	6,844.8	10,214.0	(382.2)	46,851,287
	1994	42.2	7,874.1	11,550.0	(757.4)	62,001,451

	1995	65.4	8,215.4	12,682.0	(769.9)	67,492,797
	1996	77.1	7,984.8	13,636.0	(682.7)	63,757,031
	1997	360.6	7,691.7	14,754.0	(394.7)	59,162,249
	1998	80.6	8,531.0	15,225.0	(225.4)	72,777,961
	1999	0.6	9,472.5	15,702.0	(492.8)	89,728,256
Tanzania	1990	0.0	6,451.1	4,072.0	(558.9)	41,616,691
	1991	0.0	6,557.6	4,771.0	(737.5)	43,002,118
	1992	2.7	6,677.8	4,414.0	(714.2)	44,593,013
	1993	26.8	6,791.1	4,093.0	(894.8)	46,119,039
	1994	4.9	7,235.4	4,357.0	(637.4)	52,351,013
	1995	76.7	7,405.9	5,130.0	(589.8)	54,847,355
	1996	13.4	7,362.0	6,378.0	(412.8)	54,199,044
	1997	16.3	7,128.5	7,582.0	(473.4)	50,815,512
	1998	110.8	7,633.0	8,534.0	(787.8)	58,262,689
	1999	20.7	7,967.5	8,725.0	(593.1)	63,481,056
Thailand	1990	0.0	28,165.10	96,788.0	(7,281.1)	793,272,858
	1991	0.0	37,772.30	108,974.0	(7,571.5)	1,426,746,647
	1992	237.5	41,864.40	122,790.0	(6,303.4)	1,752,627,987
	1993	471.0	52,717.20	142,294.0	(6,363.6)	2,779,103,176
	1994	241.8	65,596.30	165,258.0	(8,085.4)	4,302,874,574
	1995	0.0	100,092.70	177,819.0	(13,554.0)	10,018,548,593
	1996	290.9	107,777.50	146,830.0	(14,691.5)	11,615,989,506
	1997	47.8	109,730.70	108,104.0	(3,021.1)	12,040,826,522
	1998	353.0	104,942.80	120,576.0	14,242.5	11,012,991,272
	1999	1,343.8	96,335.00	121,051.0	12,427.9	9,280,432,225
Tunisia	1990	1.8	7,689.9	11,882.4	(463.4)	59,134,562
	1991	16.8	8,251.4	12,566.2	(469.4)	68,085,602
	1992	60.4	8,542.7	14,784.4	(1,103.5)	72,977,723
	1993	0.0	8,693.8	13,753.5	(1,323.1)	75,582,158
	1994	0.0	9,614.1	14,742.3	(536.8)	92,430,919
	1995	32.5	10,819.7	17,111.4	(774.0)	117,065,908
	1996	35.9	11,379.1	18,555.5	(477.7)	129,483,917
	1997	2.8	11,229.6	17,994.5	(595.0)	126,103,916
	1998	364.4	10,850.0	18,979.6	(675.3)	117,722,500
	1999	8.4	11,872.3	19,757.0	(442.6)	140,951,507
Turkey	1990	436.5	49,424.20	152,299.0	(2,625.0)	2,442,751,546
	1991	212.2	50,873.50	152,002.0	250.0	2,588,113,002
	1992	780.2	56,553.90	161,763.0	(974.0)	3,198,343,605
	1993	482.6	68,607.80	181,618.0	(6,433.0)	4,707,030,221
	1994	354.3	66,255.20	130,355.0	2,631.0	4,389,751,527
	1995	571.8	73,790.10	172,071.0	(2,338.0)	5,444,978,858
	1996	297.0	79,641.40	184,215.0	(2,437.0)	6,342,752,594
	1997	465.5	84,770.60	194,340.0	(2,679.0)	7,186,054,624
	1998	1,016.3	97,212.10	206,135.0	1,984.0	9,450,192,386
	1999	38.0	101,795.80	186,490.0	(1,364.0)	10,362,384,898
Uganda	1990	0.0	2,582.9	4,227.0	(429.1)	6,671,372
	1991	0.0	2,777.2	3,263.0	(449.3)	7,712,840
	1992	11.8	2,927.5	2,770.0	(337.7)	8,570,256
	1993	19.1	3,028.8	3,171.0	(396.1)	9,173,629
	1994	23.6	3,371.6	3,935.0	(265.0)	11,367,687
	1995	46.7	3,572.5	5,697.0	(444.3)	12,762,756
	1996	30.3	3,674.7	6,003.0	(500.0)	13,503,420
	1997	20.0	3,913.3	6,281.0	(520.9)	15,313,917
	1998	14.8	4,015.6	6,768.0	(706.4)	16,125,043
	1999	8.1	4,076.8	6,397.0	(746.3)	16,620,298
Venezuela	1990	9.7	33,170.4	47,149.0	8,279.0	1,100,275,436
	1991	2,277.8	34,121.6	52,444.0	1,736.0	1,164,283,587

	1992	140.2	37,848.2	58,944.0	(3,749.0)	1,432,486,243
	1993	35.5	37,539.2	58,265.0	(1,993.0)	1,409,191,537
	1994	7.8	36,852.5	56,537.0	2,541.0	1,358,106,756
	1995	38.8	35,848.2	75,445.0	2,014.0	1,285,093,443
	1996	2,017.0	35,360.3	68,818.0	8,914.0	1,250,350,816
	1997	1,387.3	35,558.1	86,295.0	3,467.0	1,264,378,476
	1998	112.4	37,003.6	93,891.0	(3,253.0)	1,369,266,413
	1999	45.6	35,852.0	87,313.0	3,689.0	1,285,365,904
Zambia	1990	0.0	6,915.9	2,992.0	0.0	47,829,673
	1991	0.0	6,968.4	2,867.0	0.0	48,558,599
	1992	0.0	6,708.8	3,018.0	0.0	45,007,997
	1993	2.5	6,485.0	3,111.0	0.0	42,055,225
	1994	13.8	6,803.9	3,228.0	0.0	46,293,055
	1995	69.1	6,952.2	3,065.0	0.0	48,333,085
	1996	29.8	7,054.4	3,705.0	0.0	49,764,559
	1997	302.0	6,654.4	3,024.0	0.0	44,281,039
	1998	408.8	6,865.3	2,993.0	0.0	47,132,344
	1999	0.0	5,852.8	3,222.0	0.0	34,255,268

Indebtedness Classifications

Severe Moderate Light
13 17 12

	Country	Indebted Class		Country	Indebted Class
1	Argentina	S	22	Mexico	L
2	Bolivia	S	23	Morocco	M
3	Brazil	S	24	Mozambique	M
4	Bulgaria	S	25	Nicaragua	S
5	Chile	M	26	Nigeria	S
6	China	L	27	Pakistan	S
7	Colombia	M	28	Panama	M
8	Côte d'Ivoire	S	29	Peru	S
9	Croatia	L	30	Philippines	M
10	Czech Republic	L	31	Poland	L
11	Egypt, Arab Rep.	L	32	Romania	L
12	Estonia	M	33	Russian Federation	M
13	Ghana	M	34	South Africa	L
14	Hungary	M	35	Sri Lanka	L
15	India	L	36	Tanzania	S
16	Indonesia	S	37	Thailand	M
17	Jamaica	M	38	Tunisia	M
18	Kenya	M	39	Turkey	M
19	Lithuania	L	40	Uganda	S
20	Macedonia, FYR	L	41	Venezuela, RB	M
21	Malaysia	M	42	Zambia	S

Investment climate

	% of gross capital formation		December	September	September
	1990	1999	2000	2000	2000
Argentina	9.3	44.2	68.8	45.8	55.0
Bolivia	4.4	64.7	69.5	28.6	42.5
Brazil	1.1	21.3	64.5	45.0	51.3
Bulgaria	0.1	34.1	67.3	37.1	42.5
Chile	7.8	62.8	74.8	67.2	65.8
China	2.8	10.5	73.8	60.6	59.8
Colombia	6.7	10.1	60.3	44.0	48.9
Côte d'Ivoire	6.6	19.2	54.0	24.1	32.5
Croatia	..	29.2	70.3	45.8	49.7
Czech Republic	2.4	33.7	73.3	60.9	63.1
Egypt, Arab Rep.	5.9	5.2	69.3	51.0	56.4
Estonia	7.2	23.8	73.8	55.1	55.7
Ghana	1.8	0.9	53.8	29.5	37.6
Hungary	0.0	14.0	72.0	64.9	65.2
India	0.2	2.1	61.8	51.5	53.8
Indonesia	3.1	-9.2	54.8	27.4	38.5
Jamaica	11.7	28.9	67.8	33.8	42.7
Kenya	3.4	1.0	60.3	25.0	37.6
Lithuania	0.0	20.0	71.8	43.7	50.8
Macedonia, FYR	..	4.1	..	..	37.4
Malaysia	16.4	8.8	75.8	59.5	61.1
Mexico	4.3	10.5	73.0	56.7	59.7
Morocco	2.5	0.0	67.8	47.3	55.1
Mozambique	2.3	29.6	55.3	19.8	28.6
Nicaragua	0.0	30.7	52.3	21.8	26.3
Nigeria	14.0	11.8	59.3	18.1	32.1
Pakistan	3.2	4.3	53.8	19.2	32.0
Panama	14.8	0.7	72.8	46.7	52.2
Peru	0.9	17.3	69.5	42.3	39.1
Philippines	5.0	4.0	65.0	49.4	52.8
Poland	0.6	17.8	73.8	62.2	63.6
Romania	0.0	15.4	58.5	30.3	36.6
Russian Federation	0.0	5.3	66.3	26.7	37.9
South Africa	..	6.7	68.0	55.1	57.7
Sri Lanka	2.4	4.1	59.0	33.3	39.8
Tanzania	0.0	12.1	59.5	20.3	28.9
Thailand	6.9	23.8	75.3	53.2	59.5
Tunisia	1.9	6.3	72.5	54.5	57.5
Turkey	1.9	1.8	55.5	46.8	52.7
Uganda	0.0	21.1	64.3	22.7	33.7
Venezuela, RB	9.1	20.0	70.0	37.9	43.8
Zambia	35.7	29.6	57.3	15.5	27.0

Balance of payments current account

	Goods and services				Current account balance	
	Exports $ millions		Imports $ millions		$ millions	
	1990	1999	1990	1999	1990	1999
Argentina	14,800	27,747	6,846	32,589	4,552	-12,312
Bolivia	977	1,311	1,086	1,989	-199	-556
Brazil	35,170	55,746	28,184	63,648	-3,823	-25,073
Bulgaria	6,950	5,793	8,027	6,558	-1,710	-685
Chile	10,221	19,406	9,166	18,058	-485	-80
China	57,374	218,494	46,706	189,797	11,997	15,667
Colombia	8,679	13,865	6,858	13,351	542	-61
Côte d'Ivoire	3,503	5,346	3,445	4,137	-1,214	38
Croatia	..	8,118	..	9,791	..	-1,522
Czech Republic	..	33,188	..	33,989	..	-1,032
Egypt, Arab Rep.	9,151	13,537	13,710	21,109	-634	-1,708
Estonia	*664*	3,943	*711*	4,248	*36*	-295
Ghana	983	2,584	1,506	3,839	-223	-766
Hungary	12,035	27,496	11,017	28,302	379	-2,101
India	23,028	54,047	31,485	67,250	-8,145	-3,699
Indonesia	29,295	55,821	27,511	42,151	-2,988	5,785
Jamaica	2,217	3,356	2,390	3,928	-312	-256
Kenya	2,228	2,653	2,705	3,153	-527	11
Lithuania	..	4,238	..	5,337	..	-1,194
Macedonia, FYR	..	1,441	..	1,926	..	-109
Malaysia	32,665	95,971	31,765	76,140	870	12,606
Mexico	48,805	148,125	51,915	156,268	-7,451	-14,166
Morocco	6,239	10,624	7,783	11,960	-196	-167
Mozambique	229	586	996	1,638	-415	-429
Nicaragua	392	839	682	2,011	-305	-587
Nigeria	14,550	13,855	6,909	12,063	4,988	506
Pakistan	6,217	8,838	9,351	11,688	-1,352	-2,187
Panama	4,438	6,888	4,193	7,700	209	-1,333
Peru	4,120	7,636	4,087	8,853	-1,419	-1,822
Philippines	11,430	39,012	13,967	36,767	-2,695	7,910
Poland	19,037	38,522	15,095	52,213	3,067	-12,487
Romania	6,380	9,868	9,901	11,380	-3,254	-1,297
Russian Federation	*53,883*	84,889	*48,915*	52,571	*468*	20,960
South Africa	27,119	33,320	21,017	30,005	2,065	-464
Sri Lanka	2,293	5,566	2,965	6,717	-298	-493
Tanzania	538	1,190	1,474	2,241	-559	-593
Thailand	29,229	71,410	35,870	56,345	-7,281	12,428
Tunisia	5,203	8,793	6,039	9,249	-463	-443
Turkey	21,042	45,724	25,652	48,726	-2,625	-1,364
Uganda	246	726	676	1,834	-429	-746
Venezuela, RB	18,806	22,122	9,451	16,985	8,279	3,689
Zambia	1,360	904	1,897	1,036	-594	..

Global financial flows

	Net private capital flows		Foreign direct investment		Portfolio investment flows				Bank and trade-related lending	
					Bonds		Equity			
	$ millions		$ millions		$ millions		$ millions		$ millions	
	1990	1999	1990	1999	1990	1999	1990	1999	1990	1999
Argentina	-203	32,296	1,836	23,929	-857	8,000	13	404	-1,195	-37
Bolivia	3	1,016	27	1,016	0	0	0	0	-24	0
Brazil	563	22,793	989	32,659	129	2,683	0	1,961	-555	-14,510
Bulgaria	-67	1,112	4	806	65	18	0	102	-136	186
Chile	2,098	11,851	590	9,221	-7	862	320	18	1,194	1,750
China	8,107	40,632	3,487	38,753	-48	660	0	3,732	4,668	-2,514
Colombia	345	3,635	500	1,109	-4	1,235	0	25	-151	1,267
Côte d'Ivoire	57	74	48	350	-1	-46	0	8	10	-238
Croatia	..	2,392	0	1,408	..	539	..	0	..	444
Czech Republic	876	4,837	207	5,093	0	175	0	500	669	-932
Egypt, Arab Rep.	682	1,558	734	1,065	-1	100	0	550	-51	-157
Estonia	..	569	0	305	..	45	..	191	..	28
Ghana	-5	-16	15	17	0	0	0	19	-20	-52
Hungary	-308	4,961	0	1,950	921	605	150	592	-1,379	1,813
India	1,872	1,813	162	2,169	147	-1,126	105	1,302	1,458	-532
Indonesia	3,235	-8,416	1,093	-2,745	26	-1,458	312	1,273	1,804	-5,486
Jamaica	92	425	138	524	0	-65	0	0	-46	-33
Kenya	122	-51	57	14	0	0	0	5	65	-70
Lithuania	..	1,148	0	487	..	505	..	0	..	156
Macedonia, FYR	..	51	0	30	..	0	..	0	..	21
Malaysia	770	3,247	2,333	1,553	-1,239	747	293	522	-617	426
Mexico	8,253	26,780	2,634	11,786	661	5,621	563	1,129	4,396	8,244
Morocco	341	-118	165	3	0	-35	0	91	176	-177
Mozambique	35	374	9	384	0	0	0	0	26	-10
Nicaragua	20	382	0	300	0	0	0	0	20	82
Nigeria	467	860	588	1,005	0	0	0	2	-121	-146
Pakistan	181	53	244	530	0	-75	0	0	-63	-403
Panama	127	620	132	22	-2	381	0	0	-4	217
Peru	59	3,140	41	1,969	0	-255	0	289	18	1,138
Philippines	639	4,915	530	573	395	3,895	0	422	-286	25
Poland	71	10,452	89	7,270	0	1,096	0	721	-18	1,365
Romania	4	714	0	1,041	0	-681	0	0	4	355
Russian Federation	5,556	3,780	0	3,309	310	0	0	644	5,246	-173
South Africa	..	4,533	-89	1,376	..	234	..	3,855	..	-932
Sri Lanka	53	109	43	177	0	0	0	6	10	-74
Tanzania	4	171	0	183	0	0	0	0	4	-13
Thailand	4,399	2,471	2,444	6,213	-87	-1,358	449	2,527	1,593	-4,911
Tunisia	-121	739	76	350	-60	240	0	0	-137	149
Turkey	1,782	8,667	684	783	597	3,223	35	800	466	3,861
Uganda	16	221	0	222	0	0	0	0	16	-1
Venezuela, RB	-126	3,130	451	3,187	345	134	0	67	-922	-258
Zambia	194	151	203	163	0	0	0	0	-9	-12

Central government finances

	Current revenue		Total expenditure		Overall budget deficit (including grants)		Financing from abroad		Domestic financing		Debt and interest payments	
	% of GDP		% of GDP		% of GDP		% of GDP		% of GDP		Total debt % of GDP	Interest % of current revenue
	1990	1998	1990	1998	1990	1998	1990	1998	1990	1998	1998	1998
Argentina	10.4	13.8	10.6	15.4	-0.4	-1.5	0.2	3.0	0.2	-1.5	..	16.2
Bolivia	13.7	17.5	16.4	22.0	-1.7	-2.3	0.7	1.9	1.0	0.5	46.9	9.4
Brazil	22.8	*23.9*	34.9	*24.6*	-5.8	*-7.3*	..	..	..	..	..	*14.4*
Bulgaria	47.1	33.9	55.1	33.5	-8.3	2.8	-0.8	-0.7	9.1	-2.1	..	13.0
Chile	20.6	23.0	20.4	22.6	0.8	0.4	..	-0.2	..	-0.2	13.9	3.0
China	6.3	6.3	10.1	9.3	-1.9	-2.2	0.8	0.1	1.1	2.2	..	..
Colombia	12.6	11.7	11.6	16.6	3.9	-5.1	..	1.9	..	3.2	22.0	24.7
Côte d'Ivoire	22.0	20.9	24.5	23.5	-2.9	-1.3	4.0	0.7	0.4	0.5	115.0	20.6
Croatia	*33.0*	45.4	*37.6*	45.6	*-4.6*	0.6	*0.0*	0.1	*4.7*	-0.7	..	3.2
Czech Republic	..	33.1	..	35.5	..	-1.6	..	-0.8	..	2.4	11.7	3.2
Egypt, Arab Rep.	23.0	*26.3*	27.8	*30.6*	-5.7	*-2.0*	-0.7	*-0.6*	6.4	*2.6*	..	*23.0*
Estonia	*26.2*	31.7	*23.7*	32.9	*0.4*	-0.1	*0.0*	-0.7	*-0.4*	0.7	4.3	1.0
Ghana	12.5	..	13.2	..	0.2	..	1.3	..	-1.5	..	..	..
Hungary	52.9	36.2	52.1	44.1	0.8	-6.2	-0.5	0.4	-0.3	5.8	61.5	21.3
India	12.6	11.5	16.3	14.9	-7.7	-4.8	0.6	0.1	7.1	4.8	49.7	35.7
Indonesia	18.8	16.0	18.4	17.6	0.4	-2.7	0.7	5.0	-1.1	-2.3	53.3	19.7
Jamaica	..	..	..	..	..	..	..	..	..	..	..	..
Kenya	22.4	*27.2*	27.5	*29.1*	-3.8	*-0.9*	1.3	*-0.2*	4.5	*1.1*	..	*28.0*
Lithuania	*31.9*	26.7	*28.9*	30.3	*1.4*	-0.4	..	1.8	..	-1.3	15.6	4.2
Macedonia, FYR	..	..	..	..	..	..	..	..	..	..	..	..
Malaysia	26.4	*23.1*	29.3	*19.7*	-2.0	*2.9*	-0.7	*-0.1*	2.8	*-1.2*	..	*10.2*
Mexico	15.3	13.0	17.9	14.7	-2.5	-1.4	0.3	0.5	2.3	0.9	27.8	16.5
Morocco	26.4	..	28.8	..	-2.2	..	3.9	..	-1.6	..	..	..
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..
Nicaragua	33.5	..	72.0	..	-35.6	..	12.7	..	22.9	..	..	..
Nigeria	..	..	..	..	..	..	..	..	..	..	..	..
Pakistan	19.1	16.2	22.4	21.8	-5.4	-6.4	2.3	1.6	3.1	4.8	79.1	42.2
Panama	25.6	24.9	23.7	27.9	3.0	-0.7	-3.4	3.9	0.4	-3.2	..	17.2
Peru	12.5	17.6	20.6	18.0	-8.1	-0.1	5.4	0.3	2.7	-0.2	..	10.6
Philippines	16.2	17.2	19.6	19.1	-3.5	-1.9	0.4	0.5	3.1	1.4	66.2	21.7
Poland	..	35.4	..	37.5	..	-1.0	..	0.2	..	0.8	42.9	9.1
Romania	34.4	*26.5*	33.8	*31.9*	0.9	*-3.9*	0.0	*0.9*	-0.9	*3.0*	..	*13.9*
Russian Federation	..	18.6	..	25.5	..	-5.3	..	3.2	..	2.1	140.4	29.7
South Africa	26.3	27.3	30.1	30.4	-4.1	-2.6	-0.1	0.0	4.1	2.6	51.0	21.3
Sri Lanka	21.0	17.2	28.4	24.9	-7.8	-8.0	3.6	1.0	4.2	7.0	89.2	31.4
Tanzania	..	..	..	..	..	..	..	..	..	..	..	..
Thailand	18.5	16.2	14.1	22.7	4.6	-7.7	-1.5	1.3	-3.1	6.4	10.8	1.2
Tunisia	30.7	29.3	34.6	31.7	-5.4	-0.4	1.8	0.0	3.6	0.4	59.6	11.6
Turkey	13.7	23.7	17.4	32.1	-3.0	-8.4	0.0	-1.5	3.0	9.9	41.4	49.9
Uganda	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	23.7	17.2	20.7	20.7	0.0	-3.7	1.0	0.2	-1.0	3.5	..	13.8
Zambia	..	..	..	..	..	..	..	..	..	..	..	..

Representative County Debt Tables

ARGENTINA

(US$ million, unless otherwise indicated)

	1990	1991	1992	1993	1994	1995	1996	1997
1. SUMMARY DEBT DATA								
TOTAL DEBT STOCKS (EDT)	**62,233**	**65,403**	**68,345**	**70,576**	**80,338**	**93,925**	**105,170**	**123,221**
Long-term debt (LDOD)	**48,705**	**49,374**	**49,855**	**58,403**	**68,956**	**77,624**	**86,677**	**99,365**
Public and publicly guaranteed	46,905	47,574	47,611	52,034	55,832	61,557	67,609	73,955
Private nonguaranteed	1,800	1,800	2,244	6,369	13,123	16,066	19,068	25,411
Use of IMF credit	**3,083**	**2,483**	**2,314**	**3,520**	**4,211**	**6,131**	**6,293**	**5,868**
Short-term debt	**10,445**	**13,546**	**16,176**	**8,653**	**7,171**	**10,170**	**12,200**	**17,988**
of which interest arrears on LDOD	7,562	8,625	9,076	1	1	0	0	0
Official creditors	132	259	627	0	0	0	0	0
Private creditors	7,429	8,366	8,450	1	1	0	0	0
Memo: principal arrears on LDOD	4,369	4,982	5,782	0	0	0	0	0
Official creditors	224	331	430	0	0	0	0	0
Private creditors	4,145	4,652	5,352	0	0	0	0	0
Memo: export credits	8,964	9,608	9,749	11,593	12,514	12,262	11,791	10,517
2. AGGREGATE NET RESOURCE FLOWS AND NET TRANSFERS (LONG-TERM)								
NET RESOURCE FLOWS	**273**	**3,699**	**5,742**	**16,302**	**10,882**	**11,148**	**16,188**	**19,751**
Net flow of long-term debt (ex. IMF)	-1,597	798	1,311	7,480	6,555	6,119	10,206	10,844
Foreign direct investment (net)	1,836	2,439	4,012	3,261	3,107	4,783	5,090	6,645
Portfolio equity flows	13	420	392	5,529	1,205	211	864	2,236
Grants (excluding technical coop.)	21	42	27	32	16	36	27	26
Memo: technical coop. grants	84	101	112	138	159	166	228	205
official net resource flows	477	802	126	2,704	747	1,473	51	-84
private net resource flows	-203	2,897	5,616	13,598	10,135	9,675	16,136	19,835
3. MAJOR ECONOMIC AGGREGATES								
Gross national product (GNP)	135,036	175,308	222,420	254,637	277,957	276,180	293,443	318,617
Exports of goods & services (XGS)	16,654	16,132	16,832	17,787	21,578	28,260	31,754	34,003
of which workers remittances	0	0	0	42	47	41	41	41
Imports of goods & services (MGS)	13,100	17,572	22,955	25,828	31,969	31,419	35,834	44,431
International reserves (RES)	6,222	7,463	11,447	15,499	16,003	15,980	19,719	22,425
Current account balance	4,552	-647	-5,462	-7,672	-10,118	-2,768	-3,787	-10,119
4. DEBT INDICATORS								
EDT / XGS (%)	373.7	405.4	406.0	396.8	372.3	332.4	331.2	362.4
EDT / GNP (%)	46.1	37.3	30.7	27.7	28.9	34.0	35.8	38.7
TDS / XGS (%)	37.0	33.6	29.0	36.9	31.0	34.3	44.1	58.7
INT / XGS (%)	16.3	18.1	16.8	18.6	19.0	19.0	18.6	21.8
INT / GNP (%)	2.0	1.7	1.3	1.3	1.5	1.9	2.0	2.3
RES / EDT (%)	10.0	11.4	16.7	22.0	19.9	17.0	18.7	18.2
RES / MGS (months)	5.7	5.1	6.0	7.2	6.0	6.1	6.6	6.1
Short-term / EDT (%)	16.8	20.7	23.7	12.3	8.9	10.8	11.6	14.6
Concessional / EDT (%)	0.8	0.9	1.7	2.7	2.8	2.9	2.4	1.8
Multilateral / EDT (%)	8.0	8.3	7.4	10.1	9.6	10.0	9.3	8.3

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