

# Stock and Bond Issues and Capital Markets in Less Developed Countries

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**I**N THE 1950S, FOREIGN AID was considered by some to be the most important means of alleviating the financial difficulties associated with capital formation and economic development in the less developed countries (LDCs). In the 1960s, foreign aid grew less rapidly, and a certain disillusionment set in as to its effectiveness. The favored solution then became government fiscal policy: taxation to raise the rate of gross domestic savings, and government investment expenditure and development loans to allocate that saving. Again, some disillusionment had set in by the late 1960s. Governments had done perhaps all they could to raise their revenue share in gross national product (GNP) quickly, and it did not seem to be sufficient for development goals. A significant portion of increased revenues had been used for nondevelopment government consumption expenditures. Moreover, government allocation of its investible resources had not always been efficient, nor had government lending programs, which so often were subject to noneconomic (i.e., political) criteria.

The new emphasis for the 1970s, for some, is to raise the rate of private domestic voluntary saving and to allocate that saving more efficiently through the development and effective use of capital markets in LDCs. This view, indeed hope, has manifested itself more at the policy and operational level than it has in academic circles.

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Policymakers in a large number of LDCs have tended to emphasize the benefits of capital market development without close examination of opportunity costs—indeed, neither benefits nor costs have been estimated carefully. The key issue, in our view, is *not* whether market-oriented LDCs should have capital markets or not but the *degree* to which government policy should aid their development. Should a capital market evolve in response to the demand for its services (demand-following), subject only to legal regulation to improve the market, or should its development be actively encouraged (subsidized) by the government, in effect providing its services in advance of the demand for them and, hence, generating that demand (supply-leading)?<sup>1</sup>

One difficulty in discussing the appropriate role of the capital market in LDCs lies in the ambiguous and multiple ways in which the expression “capital markets” is used. In the broadest connotation, capital markets refer to the entire organized financial system, including commercial banks and all other financial intermediaries, and to short-term as well as long-term primary and indirect nonmonetary financial claims.<sup>2</sup> While short-term (money) and long-term (capital) markets are typically closely related, we prefer to distinguish between the two. An intermediate definition of capital markets includes all organized markets and institutions dealing in long-term credit instruments (conventionally defined as having a maturity in excess of one year), including stocks (equities), bonds (government and private), term loans, mortgages, and time or savings deposits.<sup>3</sup> Here the focus is on the demand for and supply of long-term funds, presumably to finance fixed investment.

The narrowest, and probably most commonly used, definition of a capital market is the one that we have adopted, viz., the locus of the

<sup>1</sup> For a discussion of demand-following versus supply-leading phenomena, see Hugh T. Patrick, “Financial Development and Economic Growth in Underdeveloped Countries,” *Economic Development and Cultural Change*, Vol. XIV (January 1966), pp. 174–89.

<sup>2</sup> One example is E.S. Shaw, “Fashion and Economics in Capital Markets,” presented to the Symposium on Capital Markets in Colombia in March 1971. This short paper presents the main arguments for and against capital market development. We use here the standard Gurley-Shaw terminology and classification: primary claims are the external sources of funds (liabilities) of government, business, and household spending units, such as short-term and long-term loans, trade credit, stocks, and bonds; indirect claims are the sources of funds (liabilities) of financial institutions, such as money, time and savings deposits, and insurance reserves.

<sup>3</sup> See Phillips Perera, *Development Finance: Institutions, Problems, and Prospects* (New York, 1968), p. 83.

organized market where stocks (common and preferred claims of equity ownership) and bonds (including debentures and convertible bonds) are bought and sold using the services of brokers, dealers, and underwriters. Also, we use "stocks and bonds" and "securities" synonymously. The emphasis is on the activity of market transactions (buying and selling); characteristically this occurs in a specified physical location, usually institutionalized in the form of a securities exchange. The capital market can be dichotomized in two ways: the new issues market (the initial public sale of securities supplied by newly listed firms or of new issues by previously listed firms) versus the secondary market (trading in issues previously issued publicly); and the private securities market (trading in the stocks and bonds of privately owned corporations) versus the government securities market (normally government bonds, since public trading of privately held shares in government-controlled corporations is considered to be part of the private securities market).

In this preliminary study we attempt a cross-country survey of the actual experience of LDCs with issues of stocks and bonds and with capital markets. The sequence is first to consider the goals of capital market development, next to examine the general characteristics of capital markets in LDCs, then to discuss policy proposals to improve capital markets, and finally to summarize our main conclusions.

## **I. Some Conceptual Issues**

The theory of the role of issues of stocks and bonds, together with issues of other primary claims, and of capital markets is one component of standard Anglo-American theory (i.e., the blending of neoclassical and Keynesian assumptions and analyses) and does not require detailed explanation here. Increasing the supply of the factors of production, enhancing their quality, and combining (allocating) them efficiently are important in achieving development. Theoretically, issues of stocks and bonds, like other forms of finance, increase the saving rate by making saving more attractive and allocate that saving to the most efficient investors and investment activities. Moreover, investment bankers, like other financiers, in some circumstances may take on entrepreneurial functions in encouraging the development and growth

of businesses. Also, the causal chain from financial variables to real variables (via the interest rate, the cost of capital, the marginal efficiency of investment, the wage rate/capital cost ratio) to the growth of output and employment is well stated in the standard body of theory.

This causal chain can be, and often is, vitiated or broken by the market imperfections that are more prevalent in most LDCs than in most economically advanced countries (EACs). Imperfections exist in capital and money markets, foreign exchange and trade, government revenues and expenditure, and labor markets, as well as in markets for stocks and bonds. While governments seldom try to control the price or yield of shares directly, they are much more likely to control (peg) government bond prices and yields directly and, through legislation or administrative suasion, to request certain categories of financial institution to purchase and hold government debt, as secondary reserves, etc. Capital market imperfections are discussed further in Section III.

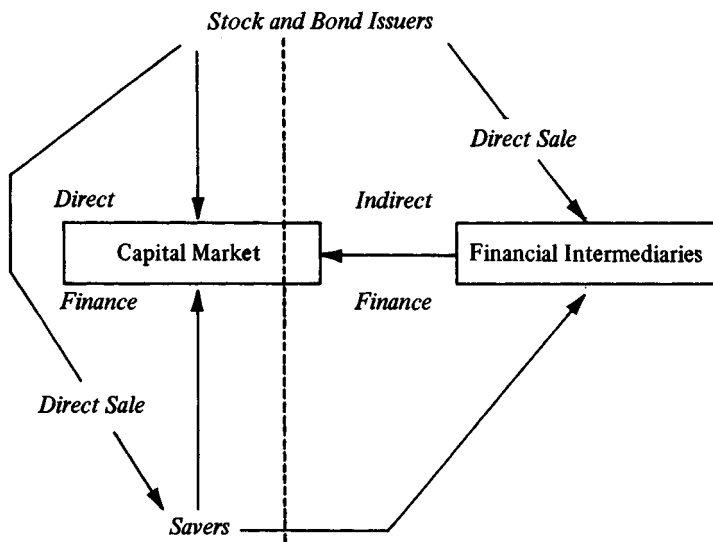
Two important goals of LDCs are increasing the rate of growth of output and improving the distribution of income, wealth, and economic power.

How do issues of stocks and bonds and capital markets affect achievement of these goals? First, the main and most direct impact of stocks and bonds on real economic variables comes from their issue by spending units (government and corporations), whereby funds are made available to them for expenditure (presumably investment) purposes. The holding or exchanging (trading) of previously issued securities has less direct effects, although there are probably some indirect effects on consumption and saving (via changes in wealth and portfolio composition) and on investment (depending on how sellers use their acquired funds and how buyers might otherwise have used them).

Second, how important are stocks and bonds in relation to other sources of finance? By no means all—indeed, often relatively little—of the new issues of stocks and bonds are sold initially through the capital market; private placement is an important alternate mechanism. Direct finance (sales by spending units to savings units) is distinguished from indirect finance (sales by spending units to financial intermediaries). These alternatives are delineated schematically in Chart 1. In this schema, underwriters and brokers are included as part of the capital market rather than as financial intermediaries.<sup>4</sup> The difference between

<sup>4</sup> Financial intermediaries are conventionally defined as those financial institutions that issue their own (predominantly indirect) securities to certain spending units (mainly savers) and invest the funds so obtained in the (predominantly primary) securities of other spending units (mainly investors).

CHART I. ISSUES OF SECURITIES: PRIVATE PLACEMENT VERSUS SALE THROUGH CAPITAL MARKETS, AND DIRECT VERSUS INDIRECT FINANCE <sup>1</sup>



<sup>1</sup> Dotted line divides direct from indirect finance. A direct sale by issuers of stocks and bonds to financial intermediaries is part of indirect finance.

direct sale (private placement) and sale through the facilities of a capital market is important both conceptually and empirically; evidence on this is presented in the next section.

Sufficient information on capital markets in LDCs is not available to test any complete set of hypotheses. However, scattered evidence permits some generalizations to be made. One generalization, put in extreme form, is that the narrowness or breadth of the capital market for issuing stocks and bonds has relatively little effect on the aggregate rate of private savings at the level of development of most LDCs. This derives from the assumption that there exist sufficiently close financial substitutes for them. It is possible that those who are willing to take the risks of equity ownership can fairly readily find direct investment opportunities, either of their own, or those of relatives or friends; perhaps the greater liquidity of publicly traded shares is sufficiently important in LDCs, as in EACs, to attract to that level of risk those savers who

would not be willing to accept the illiquidity of investment in their own or their friends' projects. Most savers are averse to taking risks, or at least appear so because of capital market imperfections.<sup>5</sup> For them, savings deposits (in any of a variety of financial institutions) are a close substitute for bonds, private or government. To the extent that rather wide interest rate differentials exist between savings deposits and bonds of the same maturity—because of, say, government or oligopolistic restrictions on interest rates on savings accounts and market-determined rates on bonds—and to the extent that saving is responsive to interest rate incentives, our generalization is incorrect.

The allocative effect of capital markets—of directing saving to the most efficient investors—is perhaps more important than the effects on the rate of saving. Presumably the most efficient firms are the most profitable, and the most profitable can sell new stock and bond issues cheaply and most readily. Several problems, however, relate to market imperfections, which are greater in LDCs than in EACs.

First, do differences in profit rates—presumably adjusted for risk—reflect efficiency reasonably well, or are they due primarily to market distortions: monopoly positions, import quotas, credit rationing, etc.? To the extent that capital market development helps firms whose profits are high owing to market imperfections rather than to efficiency in resource allocation and use, its allocative effect is harmful rather than beneficial.

Second, allocation of saving through the capital market discriminates in favor of large firms, even more so in LDCs than in EACs.<sup>6</sup> Typically, only the largest, best-known firms in LDCs are able to issue stocks and/or bonds publicly, mainly because of the lack of information for potential buyers. Frequently, these firms are foreign controlled. Smaller firms are able to issue securities through capital markets only when large numbers of investors are willing to take risks and reliable information is available, and then at a higher cost than for large firms.

However, the allocative effect is much more complex than this, since it involves possibilities of substitutability and/or complementarity on

<sup>5</sup> Masson has developed a model showing that risk-averse behavior may follow from capital market imperfections rather than necessarily from a psychological aversion to risks, Robert Tempest Masson, "The Creation of Risk Aversion by Imperfect Capital Markets," *The American Economic Review*, Vol. LXII (March 1972), pp. 77–86.

<sup>6</sup> In the United States, flotation costs of new stock issues alone vary widely, and inversely, by size of firm and of issue (from 5 per cent to 44 per cent of the total value of shares sold for 238 issues between 1960 and 1962), Stephen H. Archer and Le Roy G. Faerber, "Firm Size and the Cost of Externally Secured Equity Capital," *The Journal of Finance*, Vol. XXI (1966), pp. 69–83.

the part of both corporate issuers and purchasing individuals. It can be argued that in LDCs only the most creditworthy firms can sell their securities via a capital market, that these firms also have prime access to bank loans, and hence that such firms have greater freedom of choice between different sources of finance (in terms of availability of funds), for example, between bank loans and security issues. Development of capital markets provides no reallocation of resources to such firms. We have to examine instead where the buyers of securities obtain their funds, and how they would have used them alternatively; and how the lending bank derives its loanable funds, and to what use it would have put them alternatively.

A simple example would be that the individual buyer uses savings from current income to purchase the new security issue rather than placing them in a bank savings account, and that if he had placed them in a savings account the bank would have made a loan to the company or bought its securities. Here, there would be no reallocation of resources (ignoring reserve requirements against savings deposits). This example is clearly too simple; we would expect the individual's new savings to result in a comprehensive adjustment of his entire asset portfolio, and, similarly, for additional savings deposits to affect the composition of the asset portfolio of the commercial bank. Until we have this information, we do not know the allocative effects of capital market development.

It may be that corporate issuance of stocks and bonds is not a complete substitute for bank loans, constituting an additional source of credit. Then, capital market development favors the large firms in availability as well as in cost of funds. Indeed, in some circumstances, corporate security issues (particularly of equity) may complement other forms of external finance, so that a leverage (or multiplier) effect benefits the firm. In many countries, business management and lending institutions have rules of thumb about the optimal, or at least the unacceptable, mix of a borrowing firm's liabilities and about the ratio of its net worth to total liabilities. These rules seem to vary widely among countries, apparently based more on historical circumstances than on rational assessment. In some countries, such rules may even be formalized in legislation.<sup>7</sup> In these circumstances, enhanced opportunity to issue

<sup>7</sup> For example, under the Turkish Commercial Code, firms cannot issue bonds in excess of their registered capital, while the capitalization of reserves is treated as a distribution of profit, subject to income tax at high rates; see Central Treaty Organization, *CENTO Conference on Broadening Public Participation in Equity Investment* (Karachi, 1970), p. 50.

securities increases the share of such firms in total loanable funds even more than otherwise. Whether or not this is an efficient allocation depends on whether these firms use capital more efficiently than the small firms who are precluded from such sources of credit, and whether profitability reflects efficiency or market distortions.

But, raising the savings ratio and allocating savings efficiently for growth of output and employment may have side effects on the distribution of income, wealth, and economic power. It is difficult to hypothesize on this matter. However, it appears that until a wide range of firms (by size) and of savings units (by size, distribution of income, and wealth) participate in the capital stock market directly or indirectly (through mutual funds, pension funds, insurance companies, etc.), the development of the capital market, particularly the market for equities, is likely to increase the inequality of income and wealth distribution. However, if a country had a vigorous program of wealth redistribution by capital, estate, or inheritance taxes (we know of no market-oriented LDC with such policies), a developed capital market would not have adverse effects. It would enable corporations to change ownership without serious disruption, and wealthy taxpayers could diversify their portfolios.

One further presumed advantage of capital markets is that it would open up family or other privately owned corporations to public scrutiny and partial public ownership and, hence, to share in the benefits of growth. A major problem in many LDCs is that most privately owned large firms do not want to go public; they fear loss of control and loss of secrecy. The former fear is probably exaggerated, as the controlling group almost always continues in control. The secrecy issue is trickier, combining both behavioral traits and a rational sense of loss of possible competitive advantage. Presumably a social benefit is that publicly owned (but family controlled) firms will be more subject to pressures to maximize profits relative to other goals, and more likely to hire professional managers with more skills. Income reporting, auditing, and tax collection will also be improved.

Opening firms to partial public ownership does not necessarily reduce the power and wealth of those who still control the firm. It depends on the use to which the management or individuals put the funds received from selling the stock. It might well enable them to expand their holdings and their economic power further. One clear-cut example is the *zaibatsu* families in Japan prior to World War II, who used funds from the sale of minority shares in their corporations for further expansion.



## II. Characteristics of Securities Issues and Capital Markets in LDCs

Our search for national data for cross-country comparisons has been in two interrelated directions: to obtain aggregate estimates of net securities issues, government and private, in absolute amounts and relative to real variables, such as gross domestic investment and GNP; and to obtain evidence on the size and functions of capital markets, particularly the amount of new issues, also absolutely and relatively. (Throughout this paper, the terms "net issues" and "new issues" are used interchangeably. The data collected are designed to measure the amount of funds raised, *not* conversions or the rollover of existing government or private debt.) Considerable use was made of information in the Data Fund of the International Monetary Fund (IMF), much of which is published in *International Financial Statistics*. In addition, a variety of national sources was used, such as central bank reports, annual reports, and special national flow-of-funds reports. A questionnaire was also sent to stock exchanges in LDCs, but only a few of them responded.

### ISSUES OF STOCKS AND BONDS

The relative size of new securities issues in LDCs can be appraised not only in intercountry comparisons but also by comparison with the situation in developed countries. The total supply of securities issues for both government and private sectors varies among developed countries themselves in relation to GNP. Thus, according to statistics from the Organization for Economic Cooperation and Development (OECD),<sup>8</sup> the developed countries with a high ratio of new securities issues, equivalent to 8–11 per cent of GNP, are Belgium, Denmark, Italy, Japan, the Netherlands, and Switzerland. The next category of countries, between 4 and 7 per cent, are Canada, Finland, Spain, Sweden, and the United States. Countries below 4 per cent are France, Germany, Norway, Portugal, and the United Kingdom. This distribution of developed countries between high, medium, and low ratios of net issues to GNP does not appear to be correlated with either per capita income or growth rates. It depends primarily on how investments are financed rather than on the relative importance of investments. It is surprising that the United States and the United Kingdom, which are normally

<sup>8</sup> See Organization for Economic Cooperation and Development, *OECD Financial Statistics*, 1970, 1971, and 1972.

considered to have important capital markets, have such low ratios. The reason for this phenomenon is that the financial and capital markets in these two countries, although large in comparison with other countries, are not large in relation to investment because of reliance on other sources of finance.<sup>9</sup>

Data on new issues in relation to GNP in 9 selected developed and 13 developing countries are presented in Table 1. Among developing countries, we note a wide variation between those with high ratios of 6–8 per cent, as in Brazil, Colombia, the Republic of China (referred to as China throughout the remainder of this paper), Nigeria, and Venezuela; medium ratios of 3–6 per cent, as in Korea, Malaysia, Mexico, and Thailand; and ratios of less than 3 per cent in Argentina, Chile, India, and Kenya. As yet we have no data for other LDCs, but most of their ratios would probably be less than 3 per cent of GNP. The mean and median ratios for the 13 LDCs listed in Table 1 have been about 5 per cent in recent years, which compares rather favorably with the average of about 6 per cent for 16 developed countries. The range of the ratios of LDCs, not surprisingly, overlaps those of EACs. Regarding trends, the ratios in LDCs are generally rising, except in Argentina, where the ratio has declined since 1964, in Chile, for which data end in 1964, and in China, where the ratio was more or less stable until 1968. An analysis of the data on China and Chile (summarized in Tables 2 and 3 but given in detail in Tables 8 and 9, in the Appendix) reveals that the main reason for the decline in these two countries is the reduction in central government debt issue.

The issuance of securities ( $\Delta M$ ) in a country in any given year, or over a period of years, depends on the need of the investing sectors (i.e., business and government) to raise capital. This need is a function of how much investment is planned and the extent to which such planned investment can be financed from domestic funds (e.g., retained profits for the business sector and current budget surpluses for the government) and borrowing abroad. If the amount of internally generated

<sup>9</sup> This is also true of the historical pattern for the United States. Goldsmith estimates that between 1900 and 1963 the ratio of net new securities issues to GNP for corporate bonds and stock was 1.8 per cent (0.9 per cent each), and for government securities 3.8 per cent (3.0 per cent federal and 0.8 per cent local), totaling 5.6 per cent. This was about half the claims against all non-financial sectors (net home mortgages alone averaged 1.7 per cent of GNP); increased claims against financial institutions averaged 7.4 per cent of GNP, Raymond W. Goldsmith, *Financial Structure and Development* (Yale University Press, 1969), Table 1–1, pp. 10–11. However, the data on stock and bond issues are for public issues only.

funds and assistance from abroad is either given or uniquely related to the level of investment ( $I$ ), and if bank credit is ignored, then the supply of securities, broadly defined, in relation to the level of investments would also be stable, or at least predictable. On the other hand, if investment increases more than proportionately to retained profits, one would expect the supply of securities to rise in relation to investment. The data in column 4 of Table 8 indicates that the ratio  $\frac{\Delta M}{I}$  is not stable in most countries, but in a number of them, such as Kenya, Korea, Malaysia, Nigeria, and Thailand, the trend of this ratio was upward in the 1960s.

During the period 1965–70, in most of the LDCs listed in Table 8, new issues of securities financed between one fourth and one fifth of domestic investment. The low-ratio countries were Argentina (7 per cent) and Kenya (13 per cent), and the high-ratio ones were Brazil (46 per cent), Colombia (48 per cent), and Venezuela (27 per cent). In the nine selected developed countries shown in Table 1, new issues on average also financed, during the period 1965–70, about one fourth to one fifth of total domestic investments. Those with high ratios were Belgium (38 per cent) and the Netherlands (35 per cent), while the low-ratio countries were France (8 per cent) and Norway (12 per cent). Sharp cyclical fluctuations existed in Canada (6 per cent in 1969 and 15 per cent in 1970), the United States (15 per cent in 1966, 33 per cent in 1968, 24 per cent in 1969, and 40 per cent in 1970), and the United Kingdom (26 per cent in 1965, 7 per cent in 1970, and 43 per cent in 1971).

The supply of securities in relation to GNP also depends on the investment/income ratio, namely,  $\frac{I}{Y}$ . In other words, a rising investment rate in a country may offset a relative decline in the amount of market-financed investment, that is,  $\frac{\Delta M}{Y} = \frac{\Delta M}{I} \cdot \frac{I}{Y}$ . It appears from Table 8 that the rise in  $\frac{\Delta M}{Y}$  noted for most LDCs in Table 1 is generally associated with a rise in the  $\frac{I}{Y}$  ratio, which has either reinforced the rise, for example, Korea and Thailand, or more than offset the decline, for example, Mexico and Venezuela, in the  $\frac{\Delta M}{I}$  ratio in many countries.

TABLE 1. SELECTED COUNTRIES: NEW SECURITIES ISSUES, 1960-71<sup>1</sup>  
(As percentage of gross national product)

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
<b>Africa</b>												
Kenya <sup>2</sup>	...	...	...	...	1.8	1.6	2.9 <sup>a</sup>	1.3	2.5	3.8	3.0	...
Nigeria	...	...	...	...	...	...	...	3.2 <sup>a</sup>	4.6 <sup>a</sup>	6.8 <sup>a</sup>	7.8 <sup>a</sup>	...
<b>Latin America</b>												
Argentina	3.1	3.5	4.1	2.6	5.3	1.3	2.5	1.1	0.9	0.6	2.5	...
Brazil	3.6	3.7	3.8	3.1	3.8	5.9	5.2	7.8	9.0	8.3	8.3	...
Chile <sup>4,5</sup>	5.7	3.1	5.0	3.1	1.7	...	...	...	...	...	...	...
Colombia	...	...	...	...	...	...	7.6	...	...	10.1	...	...
Mexico <sup>6</sup>	2.1	1.3	1.4	2.3	4.5	7.1	3.2	4.2	2.8	3.3 <sup>2</sup>	3.2 <sup>2</sup>	4.8 <sup>2</sup>
Venezuela <sup>5</sup>	...	...	5.4	5.7	4.2	7.6	7.4	8.8	6.0	6.6	6.2	7.2
<b>Asia</b>												
China	1.1	2.4	2.6	2.8	1.6	7.8	7.9	8.9	6.8	2.1	...	...
India <sup>5</sup>	...	...	...	3.1	1.2	2.6	2.8	1.4	...	...	...	...
Korea	...	2.2	3.1	3.9	2.8	4.7	4.1	3.5	3.5	6.5	5.7	4.9
Malaysia	...	...	3.0	1.5	3.3	3.1	4.7	5.3	5.5	4.5	3.8	6.2
Thailand	1.8	2.0	3.0	1.5	3.3	3.1	4.7	3.1	3.5	5.5	5.2	5.6
<b>All Developing Countries</b>	2.8	2.6	3.7	3.2	3.0	4.3	4.6	4.4	4.5	5.2	5.1	5.7
Mean	2.1	2.4	3.6	3.1	3.1	3.9	4.1	3.5	4.1	5.5	5.2	5.6
Median												
<b>Selected Developed Countries</b>												
High	6.8	5.5	8.2	4.5	5.4	7.2	6.8	9.1	10.4	8.8	9.5	...
Belgium	9.0	10.0	9.6	9.6	10.2	10.2	9.3	9.6	9.9	8.8	9.3	10.2
Netherlands	6.1	8.1	7.6	8.5	8.1	7.2	6.5	6.5	7.4	6.9	7.0	9.3
Switzerland												
Medium	4.5	6.1	3.4	4.8	4.4	3.5	4.0	4.4	3.7	1.3	3.3	4.0
Canada	3.4	2.4	5.4	5.7	4.4	3.7	4.9	6.9	7.3	7.7	5.8	7.5
Sweden	2.9	5.8	-0.1	4.5	4.4	2.9	2.5	4.9	4.8	3.5	5.6	5.7
United States												
Low	1.6	2.2	2.1	2.8	2.4	2.4	2.3	2.0	1.5	2.1	2.3	2.7
France	1.8	2.1	2.0	2.6	3.1	3.1	2.5	2.9	4.7	3.9	4.6	...
Norway	4.6	2.1	5.1	1.2	1.7	4.8	2.3	2.7	0.7	0.6	1.4	7.7
United Kingdom												
<b>Developed Countries</b>	4.9	4.9	4.8	4.9	4.9	5.0	4.6	5.4	5.6	4.8	5.4	6.7
Selected	4.5	5.0	4.8	5.5	5.0	5.5	5.0	5.3	5.8	5.2	5.3	6.7
All <sup>7</sup>												

For footnotes, see page 265.

An important feature of the LDCs in our sample is the large and rising share of the government sector. Data for either the latest period or latest year reveal that in 6—Argentina, Kenya, Nigeria, India, Malaysia, and Thailand—of the 13 countries in Table 8 for which we have aggregate data, government securities accounted for about 60–80 per cent of total new issues. In Chile and Mexico, it is about 40 per cent and in Brazil, about 10 per cent. Only in China, Korea, and Venezuela are government securities issues very small.

This distribution in the supply of securities is not surprising, partly because it is the government sector in LDCs that has expanded most rapidly, both in increases in current expenditures and in relation to investment expenditure and development planning. Governments appear eager to issue as many bonds and treasury bills as the economy can absorb, and in this sense may be regarded as having an elastic supply function. One drawback to this is that the rate of return offered on government securities tends to be low, not only relative to the level of domestic interest rates that could significantly increase the supply of savings but also generally below levels prevailing in EACs, especially if compared in real terms after adjusting for the rate of price increases.

Who purchases these issues of government and corporate securities, and how (i.e., through the capital market or directly)? Data in Table 9 provide rough answers to the first question and suggestions for answering the second. In five of the seven countries in which the government issued a high proportion of the total—Argentina, Nigeria, India, Mexico, and Thailand—the central bank was a major purchaser. It was also a significant purchaser in Chile, China, and Colombia, and occasionally

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*Footnotes to Table 1*

Sources: International Monetary Fund, Data Fund, and *International Financial Statistics*, for gross national product, gross domestic product, etc. For securities issues, see Sources Used in Preparing Tables (in the Appendix), Nos. [2], [4], [8, 9], [13], [15], [23], [25] (December 1964, March 1967, July 1969), [26], [29] (10th Anniversary Commemorative Issue, 1969), [33], [36], [38], [44], [47], [55, 56], [69], [74, 75].

<sup>1</sup> Sum total of shares, bonds, and debt certificates.

<sup>2</sup> As percentage of gross domestic product.

<sup>3</sup> Estimates based on growth in securities issues of government sector with an assumed constant ratio of other sector issues to gross national product of 0.9 per cent.

<sup>4</sup> Total sales.

<sup>5</sup> As percentage of national income.

<sup>6</sup> Net issues of fixed-income securities only.

<sup>7</sup> Total of 16 countries. In addition to the 9 selected countries, these include Denmark, Finland, Germany, Italy, Japan, Portugal, and Spain.

TABLE 2. SELECTED COUNTRIES: SUPPLY OF NEW ISSUES OF SECURITIES—  
SELECTED RATIOS<sup>1</sup>

(In per cent)

Country	Years	$\frac{\Delta Mg}{\Delta M}$	$\frac{\Delta M}{I}$	$\frac{I}{Y}$	$\frac{\Delta M}{Y}$	$\frac{M}{Y}$
Africa						
Kenya	1967-70	84.41	12.85	21.07	2.71	17.02
Nigeria	1969-70	88.23	50.50	14.58	7.30	15.37
Asia						
China	1965-69	10.92	25.60	24.50	6.72	...
India	1964-67	76.23	19.47	11.27	2.10	...
Korea	1970-71	3.44	19.42	26.99	5.24	24.81
Malaysia	1969-71	88.33	29.10	16.57	4.82	...
Thailand	1970-71	60.44	22.22	24.35	5.41	...
Latin America						
Argentina	1968-70	64.87	6.97	19.32	1.35	...
Brazil	1968-70	9.07	48.44	17.62	8.53	...
Chile	1960-64	42.84	24.72	12.83	3.06	...
Colombia	1966-69	-5.84	47.90	20.98	10.05	55.45
Mexico	1970-71	37.53	21.37	19.08	4.08	28.01
Venezuela	1967-71	5.21	27.24	25.76	7.02	57.53
All LDCs		43.66	27.37	19.61	5.26	33.03
Africa		86.32	31.68	18.27	5.01	16.20
Asia		47.87	23.16	20.74	4.86	24.81
Latin America		25.62	29.44	19.37	5.68	46.99

Source: Table 8 (in the Appendix).

<sup>1</sup> General note for symbols:  $\Delta Mg$  = New issues of government securities  
 $\Delta M$  = New issues of securities  
 $M$  = Total value of securities outstanding  
 $I$  = Gross domestic investment  
 $Y$  = Gross national product

Changes in  $M$  may not always equal  $\Delta M$ , owing to rounding, or to occasional inconsistencies in the sources themselves, or to differences arising from averaging.

for the small amounts of government securities issued by Korea.<sup>10</sup> In some countries (for example, Kenya), the government is a substantial purchaser of its own debts, for pension and sinking funds and the like.<sup>11</sup> In a number of countries in the sample, the private sector, including financial institutions, is an important demander of government

<sup>10</sup> These data hide the full extent of central bank financing of government, since this is often done by direct borrowing rather than by bond issues. Korea and its inflation are a good illustration of this point; see Duck Woo Nam, Seung Yun Lee, and Byong Kuk Kim, *Determinants of Money Supply and the Scope of Monetary Policy, 1954-1964* (Seoul, 1965).

<sup>11</sup> The government domestic debt issue is relatively small in Kenya. For more detail, see Edward A. Arowolo, "The Development of Capital Markets in Africa, with Particular Reference to Kenya and Nigeria," *Staff Papers*, Vol. XVIII (1971), pp. 420-72.

securities. However, some of the demand from commercial banks is usually induced by central banks requiring them to hold government securities as part of legal reserve requirements.

TABLE 3. SELECTED COUNTRIES: DOMESTIC PURCHASES OF NET ISSUES OF SECURITIES <sup>1</sup>  
(In per cent)

Country	Years	Ratio Bought by					
		Government	CB	GE	PF	PB	PH
<b>Africa</b>							
Kenya <sup>2</sup>	1970-71	33.37	6.65	-0.84	42.60	19.79	-1.57
Nigeria <sup>2</sup>	1969-70	10.50	14.62	0.67	71.93	2.23	0.05
<b>Asia</b>							
China	1965-69	13.93	1.81	2.51	8.51	1.03	72.21
India	1966-67	2.82	53.48	-5.03	59.19	-0.57	-10.24
Korea	1970-71	30.14	-0.28	0.00	12.32	10.96	46.85
Malaysia <sup>2</sup>	1970-71	61.06	0.43	3.63	34.99	0.00	0.00
Thailand <sup>2</sup>	1970-71	7.21	46.88	0.00	44.67	1.25	
<b>Latin America</b>							
Argentina	1968-70	...	31.82	...	41.03	27.15	
Chile	1960-64	9.68	15.55		18.29	36.04	10.19
Colombia	1966-69	...	19.16	9.54	48.21	3.61	19.48
Mexico	1970-71	...	-20.56	4.85	42.32	60.57	
Venezuela	1966-71	4.72	0.01	5.14	24.60	65.54	

Source: Table 9 (in the Appendix).

<sup>1</sup> General note for symbols: Government = Central government  
*CB* = Central bank  
*GE* = Government enterprises  
*PF* = Private financial institutions  
*PB* = Private businesses  
*PH* = Private households

Components do not always equal 1 because of errors and omissions, especially holdings by the foreign sector.

<sup>2</sup> Government securities only.

These results are summarized in Table 4. The most conspicuous fact is that the government share of new issues, especially when purchased primarily by the central bank and/or the government, appears to be inversely correlated with the ratio of new issues to GNP.<sup>12</sup> Conversely, in countries with high ratios of new issues, private issues are predominant and are purchased mostly by business corporations and individuals.

<sup>12</sup> The data appear too crude and annual variations too great to make statistical correlation analysis worthwhile.

TABLE 4. SELECTED COUNTRIES: GOVERNMENT AND PRIVATE SECURITIES ISSUES, BY MAJOR HOLDERS

Country <sup>1</sup>	> 50 Per Cent of Government Securities			> 50 Per Cent of Private Securities		
	Are purchased by					
	Are new issues	Central banks/governments	Private financial institutions	Are new issues	Businesses/individuals <sup>2</sup>	Private financial institutions <sup>2</sup>
<b>6-8 per cent</b>						
Brazil				X		
China			X <sup>3</sup>	X	X	
Colombia				X		X
Nigeria	X	X				
Venezuela				X	X	
<b>3-6 per cent</b>						
Korea			X	X	X	
Malaysia	X		X			
Mexico		X		X	X	
Thailand <sup>4</sup>	X	X				
<b>Below 3 per cent</b>						
Argentina	X					X
Chile				X		
India	X	X				X
Kenya	X	X				

Sources: Tables 8 and 9 (in the Appendix).

<sup>1</sup> Listed by the ratio of new issues to GNP.

<sup>2</sup> For Brazil, Malaysia, Thailand, and Kenya, no data are available.

<sup>3</sup> Based mainly on 1965, 1966, and 1967.

<sup>4</sup> Based on data for 1970-71 only.

## CAPITAL MARKETS

Our research suggests that by and large the stereotypes of markedly underdeveloped capital markets in LDCs are substantially correct. With only a few exceptions (for example, in Brazil, India, Malaysia, and Singapore), markets are thin, with little or no trading and with relatively few and insignificant amounts of new public issues by private corporations. With a somewhat larger amount of issue, the market for government debt may appear to be more developed, but its sales are mainly to captive buyers. Information is poor and manipulation is substantial, especially for private issues. The occasional speculative splurges end in a crash that eliminates the nascent public investors, and the market



reverts to its lethargic state. The explanation as to why capital markets are relatively unimportant in LDCs lies in a combination of historical circumstances, current level of economic and financial development, and government policy.

### *Historical circumstances*

Historically, capital markets in the EACs have developed mainly because, with technological change, the size of business units expanded more rapidly than the means available to finance needed investments from private fortunes of businesses and friends. The formation of joint stock companies evolved as a natural consequence. Another influence was the supply of government securities to finance government expenditures, especially related to waging wars, as in the United Kingdom, where "the supply of suitable securities was provided first by the formation of joint-stock companies and then, near the end of the seventeenth century, by the beginnings of the permanent national debt."<sup>13</sup> In the United States, also, the supply of bonds to finance railroads and the emergence of government debt were important in the development of capital markets. This evolutionary development of securities markets, for government debt, and corporate issue of bonds and stocks reached its heyday for the United Kingdom, the United States, and Western Europe in the period from the 1880s to World War I, in the particular economic environment of that time—political stability, price stability, market-determined yields, large rentier classes, etc.<sup>14</sup>

Japan offered a variant on this pattern of evolution. The stock market grew out of traditional futures markets for commodities (particularly for rice), which already were highly sophisticated. This introduced a strong speculative element into the market, enhanced by a futures system of transactions in shares, too. (Korea was to follow this practice in the early 1960s.)

In most LDCs prior to World War II, capital markets were of limited significance. In the colonies of the United Kingdom, France, Italy, Germany, and the United States, the ability of governments to incur local debt was severely limited by the absence of central banks and the

<sup>13</sup> E. Victor Morgan and W.A. Thomas, *The Stock Exchange: Its History and Functions* (London, Second Edition, 1969), p. 11.

<sup>14</sup> See Raymond W. Goldsmith, "Capital Markets and Economic Development," paper presented to the International Symposium on the Development of Capital Markets, Rio de Janeiro, September 1971.

maintenance by currency boards of 100 per cent foreign exchange cover. Most corporate enterprise in LDCs was either foreign owned, with capital obtained from abroad, or family owned. Of the dozen or so LDCs with stock exchanges that were established before World War II, seven were in Latin America and four were British colonies (see Table 10, in the Appendix). To characterize the rate of growth of capital markets, or even the emergence of capital markets, in less developed countries in prewar years, one would have to say that the supply of local securities, and probably the local demand for them, was extremely limited. The available savings of local people were used either for direct investment or to hold such financial assets as gold, or even currency, with the foreign exchange counterpart invested in the metropolitan countries. Viewing the economy as a whole, it could appear that the potential demand for securities in LDCs was being satisfied by the supply of securities abroad. In global terms, the LDCs did not face balance of payments deficits, and, in fact, with economic growth, currency and foreign exchange reserves increased in most countries.

After World War II, the situation reversed itself in most LDCs. Governments, many newly independent, undertook major development programs, usually financed by aggressive financial programs. In practically all LDCs, the supply of government securities is now more than sufficient to meet domestic demand under the conditions that prevail, although the supply of local securities by private businesses remains limited. The institution of exchange controls in the newly independent countries in Asia and Africa, and also nationalization or localization of ownership,<sup>15</sup> has meant that ownership is now situated more locally than abroad. But since the transfer of ownership has been rather abrupt, either the size of business units has tended to get smaller, for example, in the export-import and construction businesses, or the industry has been reduced in scale of operations. Only a few nationalized businesses have made their securities available for trading in the market to satisfy potential demand.

Table 10 provides data on 46 organized capital markets (stock exchanges) in 28 LDCs, including location, date of establishment, number of members, and number of companies whose securities are listed. As might be expected, both the number of members and the number of

<sup>15</sup> By this term we mean the laws passed in many countries, for example, Chile, Ghana, Peru, the Philippines, Thailand, and Zambia, where foreign ownership of businesses in certain sectors of the economy is either prohibited or limited to minority status.

stocks quoted for the exchanges in LDCs are much smaller than those in the EACs. Based on the data in Table 10 and comparable data for stock exchanges in EACs (both of which have an upward bias), the average number of members in an exchange is 128 in LDCs and 404 in EACs,<sup>16</sup> and the average number of companies listed is 172 and 644, respectively.<sup>17</sup> None of the exchanges in the LDCs is comparable in size to the major exchanges in the United States, the United Kingdom, Canada, or Japan.

To provide a basis for comparing the size of the stock exchanges in their secondary market role, Table 11 (in the Appendix) provides information not only on the total value of transactions in each stock exchange, with suitable breakdowns of the type of securities dealt in, but also on the relative importance of these transactions to bank debits, to the estimated market value of the securities, and to GNP. As expected, all three ratios are significantly lower in LDCs than in EACs as a whole. The range of the ratio of transactions to debits—Col. (8)—is from 1 per cent to 5 per cent for most developed countries, while for most LDCs it is well below 1 per cent. However, Mexico and Argentina have transactions/debits ratios higher than the United States, indicating that there is an active secondary securities market in these countries.

Col. (9) provides the turnover ratios of stocks *plus* bonds to the total listed securities outstanding and of stocks alone. These indicate the degree of activity in the market (independent of size), suggestive both of the popularity of securities as an asset and of their speculative use. Although the turnover ratios are generally higher for EACs than for LDCs, there is considerable overlapping. Japan and Mexico have extremely high turnover ratios and active financial systems, although there are relatively few new issues through the market. The turnover ratios of Korea and China are also high, presenting examples of substantial speculation in very small markets. Columns (10) and (11) provide the relationship of transactions in all securities and of stock transactions to GNP. Transactions in stocks and bonds typically amount to less than 3 per cent of GNP; only in China, Malaysia/Singapore, and Mexico are these ratios substantial.

<sup>16</sup> Twenty countries, namely, Canada and the United States in North America; Austria, Belgium, Denmark, France, Germany, Ireland, Greece, Italy, Luxembourg, the Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom in Europe; and Australia, Japan, and South Africa in other regions.

<sup>17</sup> The disparities are even greater if only the largest exchange in each country is considered.

Another approach to relative market size is in terms of the ratios of the outstanding market value to GNP and to money and quasi-money. These and the other ratios are summarized by regions in Table 5. They indicate that the size of capital markets in LDCs is substantially smaller than in EACs, relative even to their much smaller GNPs. In the EACs, the market value of all securities is equivalent to the GNP and about double that of money and quasi-money, while in LDCs as a whole the market value of listed securities of stock exchanges is about one seventh of GNP and about one half the sum of money and quasi-money.

TABLE 5. SELECTED COUNTRIES: STOCK MARKET RELATIONSHIPS, 1971<sup>1</sup>

(In per cent)

	Ratio of Stock and Bond Transactions to			Ratio of Market Value of Securities to		
	Bank debits	Market value of securities outstanding	Gross national product (GNP)	Ratio of Stock Transactions to GNP	GNP	Money plus quasi-money
Developed countries <sup>2</sup>	1.43	25.18	12.25	9.90	102.36	217.62
Five selected countries <sup>3</sup>	1.60	30.78	14.70	17.65	121.98	276.96
European countries <sup>4</sup>	1.37	11.28	16.93	8.63	40.15	65.51
Not developed countries	0.91	20.35	3.17	2.44	13.80	52.06
<i>Of which</i>						
Africa and Middle East <sup>5</sup>	0.51	6.46	3.02	0.11	14.40	45.04
Latin America <sup>6</sup>	0.85	12.20	3.00	1.45	9.16	46.71
Asia <sup>7</sup>	1.19	41.57	3.61	7.76	17.44	60.67

Source: Table 11 (in the Appendix).

<sup>1</sup> Or latest year available.<sup>2</sup> Includes 5 selected and 14 European countries.<sup>3</sup> Australia, Canada, Japan, South Africa, and United States.<sup>4</sup> The 14 countries as shown in Table 11, but the coverage for each column varies considerably.<sup>5</sup> Israel, Kenya, Lebanon, Morocco, Nigeria, and Turkey.<sup>6</sup> Argentina, Brazil, Chile, Colombia, Jamaica, Mexico, Peru, Uruguay, and Venezuela.<sup>7</sup> Ceylon, China, India, Indonesia, Korea, Malaysia, Philippines, and Thailand.

A better indicator of the importance of capital markets is the amount of new issues, since only the new issues make funds directly available for government or corporate investment. Conceptually, new issues should be separated from new listings of company securities, where sale is made from existing private holdings rather than from the new issues;

the point then is to determine how the seller uses the funds derived from the sale at the listing of his securities. Empirically, however, it is difficult to obtain such data.

Indeed, a major empirical problem is to estimate the amount of new issues, government and private, that goes through the capital market rather than being privately placed.<sup>18</sup> Available qualitative evidence suggests that the public issue—in which there really is a flow of funds to the investing unit—is small. This appears to be inconsistent with the data on total issues of securities that appear in the previous section, where the new issue ratio for some LDCs is fairly high (6–8 per cent of GNP).

Governments in LDCs typically require a variety of financial institutions (banks, thrift institutions, insurance companies, pension funds) to hold government securities as secondary (or primary) reserves, thus providing a captive market<sup>19</sup> rather than a free, competitive capital market with supply and demand determining the interest rate. Often the central bank has the responsibility of supporting the market by serving as residual purchaser of new issues at par, attempting later to sell them if monetary conditions ease (and if financial institutions can be persuaded).<sup>20</sup> Although detailed country studies are needed to determine whether issues of government securities are actually public, through an operating capital market, the available data suggest that in most LDCs it is only fictionally so.

The fact that a country records a large amount of new corporate securities issues in aggregative data (such as flow of funds, or sources and uses of corporate funds) tells little about the amount sold publicly. Frequently, new incorporations are included in the data; the shares are almost always subscribed to by private individuals (or by companies under their control). A newly formed company almost never sells its shares through the market. Even new issues of firms listed on stock exchanges may not be sold in the sense that the company receives cash (or other assets) in exchange; rather, the issues are stock dividends in one form or another.

<sup>18</sup> Of course, some private placements do utilize capital market institutions, such as stockbrokers and investment bankers.

<sup>19</sup> This is not unknown in EACs but appears to be less pervasive. One exception is Japan; see Hugh Patrick, "Finance, Capital Markets, and Economic Growth in Japan," in *Financial Development and Economic Growth*, ed. by Arnold W. Sametz (New York University Press, 1972), pp. 109–39.

<sup>20</sup> One such example is Nigeria. See Arowolo, *op. cit.*

Table 6 illustrates this situation well for Argentina. New issues of corporate securities rose to as much as 2.7 per cent of GNP in 1961, as the government encouraged firms to list their shares on the exchanges and to issue new shares. From 1957–61, 20–25 per cent of new issues was by newly listed firms; even then (presuming that subscriptions were, in effect, public issues), only about one fourth of the new issues of *listed* companies was sold publicly. Since 1961 the relative importance of new issues has declined sharply, and most of what has been issued was in the form of stock distributions. It cannot be said that the stock market in Argentina has been an important vehicle for transferring savings to corporate investors.

Lack of data precludes our comparing the proportion of publicly sold to the total of new issues of securities for the other 12 country samples in the previous section. Korea is a prime example of large private issues of securities without a capital market. The Government does not issue debt through public sale; it finances deficits by direct borrowing from the central bank and by using counterpart funds. Only a few companies have shares listed on the Korean stock exchange, and new issues for cash payment are limited. In China, too, most of the new issues are privately placed. The securities market is slightly more developed than in Korea; most trading is in the shares of some 14 major listed companies. In Venezuela, shares are not actively traded, and new share issues through the securities market are limited.<sup>21</sup> Government bonds and mortgage certificates are more important and constitute most of the trading. Their prices are pegged at par, supported by the central bank and a special fund for mortgage financing. This reflects an attempt to imitate Mexico's success with fixed-yield claims that have complete liquidity at par.<sup>22</sup>

Indeed, in only three countries in the less developed world can one find fairly substantial and, developmentally, at all significant securities

<sup>21</sup> Acquisition of stocks in Venezuela is rather substantial (3.4 per cent of personal disposable income for 1962–69; more than one third of the total increase in individual financial assets), but the bulk represents issues of closely held corporations rather than of publicly offered securities. See Goldsmith, "Capital Markets and Economic Development" (cited in footnote 14), pp. 27–28.

<sup>22</sup> For brief descriptions of the role of securities markets in Argentina, Brazil, Colombia, Mexico, Peru, and Venezuela, see Antonín Basch and Milic Kybal, *Capital Markets in Latin America: A General Survey and Six Country Studies* (New York, 1970). For greater institutional detail, see the original study, *Análisis de mercados latinoamericanos de capitales* (sponsored by the Inter-American Development Bank), of which this is an updated English version.

TABLE 6. ARGENTINA: SECURITIES DISTRIBUTIONS AUTHORIZED FOR INDUSTRIAL, COMMERCIAL, AND FINANCIAL COMPANIES

(In per cent of total)

	1957	1959	1961	1963	1965	1967	1969	1971
<b>Firms previously listed on the stock exchange</b>	<b>70.5</b>	<b>77.3</b>	<b>78.7</b>	<b>99.4</b>	<b>99.7</b>	<b>96.2</b>	<b>100.0</b>	<b>100.0</b>
Publicly sold	0.7	0.5	1.7	—	—	—	—	—
Privately sold	29.2	41.8	41.2	37.9	19.9	37.3	26.6	18.9
Stock distributions	39.6	34.4	35.2	61.0	78.3	58.4	73.3	81.0
Stock dividends	35.2	33.4	33.1	21.7	57.9	51.2	46.5	34.7
Capitalization of reserves	4.4	1.0	0.2	1.7	0.2	2.1	5.1	24.0
Capitalization of revalued assets	—	—	1.9	37.5	20.2	5.2	21.7	22.3
<b>Other</b>	<b>1.0</b>	<b>0.7</b>	<b>0.7</b>	<b>0.6</b>	<b>1.5</b>	<b>0.5</b>	<b>0.2</b>	<b>0.1</b>
Bonuses to directors and staff	0.9	0.5	0.6	0.6	1.5	0.5	0.2	0.02
Previously placed	0.1	0.2	0.1	0.0	0.02	—	—	0.1
<b>Firms newly listed on the stock exchange</b>	<b>29.6</b>	<b>22.7</b>	<b>21.3</b>	<b>0.6</b>	<b>0.3</b>	<b>3.8</b>	—	—
Publicly sold and subscribed	28.8	22.4	19.6	0.6	0.3	3.8	—	—
Privately sold	0.6	0.2	0.9	—	—	—	—	—
Stock distributions	0.2	0.1	0.8	—	0.01	—	—	—
Stock dividends	0.2	0.1	0.8	—	0.01	—	—	—
Capitalization of reserves	—	—	—	—	—	—	—	—
<b>Total</b> <sup>1</sup>	<b>31</b>	<b>113</b>	<b>307</b>	<b>244</b>	<b>248</b>	<b>175</b>	<b>277</b>	<b>63.2</b>
Total <sup>2</sup>	1.1	1.5	2.7	1.4	0.7	0.3	0.3	0.5
Publicly sold <sup>2</sup>	0.3	0.4	0.6	0.0	0.0	0.0	—	—
Privately sold <sup>2</sup>	0.3	0.6	1.1	0.5	0.1	0.1	0.1	0.1

Sources: Banco Central de la República Argentina, *Memoria Anual*, various issues.<sup>1</sup> In millions of new Argentine pesos (i.e., the rate that became effective on January 1, 1970).<sup>2</sup> As a percentage of gross national product.

exchanges—Mexico, Malaysia/Singapore, and Brazil. Mexico's success came through the development of *financieras* as long-term lending institutions, which finance themselves by issuing nominally long-term, fixed-yield claims with a competitively high yield. These claims offer holders high liquidity and are attractive to savers because the issuing institution guarantees repurchase at par.<sup>23</sup> The growth of equity issues and trading in shares have been much more limited. Although the joint Malaysia/Singapore stock exchange has a long history based on British and other investment in rubber plantations and tin mines, the market plays a major role in industrial long-term financing for only a few companies, so that its aggregative impact is small. The recent Brazilian experience is perhaps the most interesting and is discussed in the next section.

The limited development of securities markets in LDCs, of course, is not particularly surprising; both nondevelopment and differential rates of development have been much affected by historical experience. (The British developed some capital markets, mainly to help to finance British-owned local plantations, mines, and commercial enterprises; none of the other colonizing nations pursued this particular pattern.) Perhaps even more important has been the limited general financial development of LDCs.

### *Economic and financial development*

In general, financial development proceeds concomitantly with economic development, with finance playing an increasingly important role.<sup>24</sup> With growth of real per capita output, an economy passes through sequential phases of financial development, first the monetization of economic activity as subsistence production and barter give way to commercialization, then the development of commercial banking as the main source of increased financial claims, and finally the relative

<sup>23</sup> This guarantee is made possible and creditable by central bank support as a lender of last resort. For more detail on the Mexican experience, see the studies by Raymond W. Goldsmith, *The Financial Development of Mexico*, Organization for Economic Cooperation and Development, Development Center (Paris, 1966); Robert Lee Bennett, *The Financial Sector and Economic Development: The Mexican Case* (Johns Hopkins Press, 1965); and Dwight Stanley Brothers and Leopoldo Solís M., *Mexican Financial Development* (University of Texas Press, 1966).

<sup>24</sup> See the important empirical work of Goldsmith, *Financial Structure and Development* (cited in footnote 9), and John G. Gurley, "Financial Structures in Developing Economies," in *Fiscal and Monetary Problems in Developing States: Proceedings of the Third Rehovoth Conference*, ed. by David Krivine (New York, 1967).



growth of thrift and other specialized long-term financial institutions. Goldsmith indicates that direct finance preceded indirect finance (individuals purchasing stocks and bonds rather than increasing claims on financial institutions) for Western Europe, the United Kingdom, and the United States, but asserts that "to expect during the next few decades a repetition in Latin America [and by extension all LDCs] of the European-North American pattern of capital market development during the half century before World War I, is to indulge in a mistaken historical analogy."<sup>25</sup>

Implicit in this phase hypothesis are theories (or at least views) of the portfolio behavior of savers, the interest and ability of investors to issue primary securities, and the nature of the development of financial institutions. The portfolio behavior of individual asset holders in LDCs has not been well studied. Conventional wisdom is that those with small amounts of assets place a high premium on liquidity and are highly risk averse, suggesting a demand for fixed-yield claims with high liquidity, such as savings deposits or *financiera* (or other pegged) bonds. With an increase in total individual or family assets as per capita GNP rises, individual preferences give greater weight to yield, thus increasing the proportion of risky (equity) or less liquid claims in the portfolio of financial assets.

An alternative hypothesis is that the lack of financial development, particularly of capital markets, is due to market imperfections.<sup>26</sup> Transactions costs are high relative to the small amounts available to savers in LDCs for purchasing financial claims. More important, the lack of information is overwhelming; costs of obtaining accurate information are inordinately high. The full panoply of capital market institutions is nascent only, if it exists at all. Regulation is limited. Monopolistic or oligopolistic elements may be important in the market. Uncertainty about the future, perhaps greater in LDCs than in EACs, increases the riskiness of investment in securities.

We attempted to examine the behavior of stock market prices in LDCs for evidence of speculation, but without conclusive results. (One difficulty is that share price indices, in some LDCs at least, appear to

<sup>25</sup> Goldsmith, "Capital Markets and Economic Development" (cited in footnote 14).

<sup>26</sup> Masson, *op. cit.* Stigler has criticized the uncritical use of this term, and clearly a more rigorous analysis (and definition) of types and degrees of market imperfection is needed. See George J. Stigler, "Imperfections in the Capital Market," Chapter 10 in his *The Organization of Industry* (Homewood, Illinois, 1968).

be technically deficient.) One test is based on the hypothesis that arbitrage in a highly developed stock market would eliminate any stable seasonal factor in stock price indices. We thus tested stock price indices for seasonality using the X-11 Seasonal Adjustment Program of the U.S. Bureau of the Census and the stock price index data of the IMF.<sup>27</sup> The results are given in Table 7. In three of seven LDCs for which data are available, a stable seasonal factor is identified (at 1 per cent significance)—but this is also true for 16 of 22 EACs. However, in all countries the standard deviation is low, the seasonal adjustment factor lying within the range of 98–102 (100 is average). Moreover, the irregular component of the index is in all cases more important than the seasonal component, vitiating the significance of the seasonal factor. Using a significance test that has a value for the irregular/seasonal (I/S) ratio of 0.5 or less, all our cases were insignificant with a ratio greater than 1.2. The average values for the standard deviation and the I/S ratio are not much different between LDCs and EACs.

A second set of tests looks at relationships between cyclical movements (on an annual basis) in share price indices and in such aggregative indicators of economic activity as real GNP, the consumer price index, the GNP implicit deflator, and gross capital formation. In one test, the standard error of estimate (in per cent) for simple fits of stock market index and GNP data to a time trend is much larger for the former than for the latter, indicating that stock prices fluctuate much more widely; however, the results cannot be distinguished between the LDC and EAC samples. A second test was to examine the  $R^2$  for regression equations “explaining” changes in the country’s stock price index by real GNP, a price index, and gross fixed investment. Except for Chile, the  $R^2$  values were low for the LDC sample, averaging about 0.26, while they were uniformly much higher for the EAC sample, averaging 0.81. Clearly, other, perhaps extraneous, factors were more at work in share price determination in LDCs. Perhaps the relationship between macrovariables, such as GNP and corporate profits, is much less close in LDCs, or effects are more lagged in LDCs.

One factor that might have a bearing on the degree of price fluctuation is the price/earnings ratio. While exact data have not been

<sup>27</sup> The period covered was generally 1957–71. Our results are consistent with an earlier study, J.B. Gupta, “Seasonality in World Financial and Trade Data,” *Staff Papers*, Vol. XII (1965), pp. 353–64.

selected, it is generally known that in the developed markets the price of equities is about 10–20 times the earnings, while in the less developed markets it is about 5–10 times the earnings. Therefore, a given disturbance will tend to have greater effect in percentage terms on securities prices in the LDCs than in the EACs.

TABLE 7. SELECTED COUNTRIES: EVIDENCE OF SEASONALITY IN MONTHLY STOCK MARKET PRICE INDICES, 1957–71

Country	Stable Seasonality	Range I/S <sup>1</sup>		Standard Deviation of Seasonal Factor
		Lowest	Highest	
<b>EACs</b>				
Australia	Yes	2.25	8.63	1.3
Austria	No	2.06	7.39	1.2
Belgium	Yes	1.20	12.78	1.6
Canada	Yes	2.46	8.42	1.7
Denmark	Yes	2.17	14.36	1.7
Finland	Yes	2.98	6.83	1.8
France	No	3.43	9.64	2.0
Germany	No	2.02	5.59	3.3
Ireland	Yes	2.25	7.38	1.3
Israel	No	2.52	5.65	1.9
Italy	No	4.11	9.44	1.3
Japan	Yes	2.12	7.20	1.7
Netherlands	Yes	2.28	8.61	1.8
New Zealand	Yes	2.76	7.30	1.6
Norway	Yes	1.54	9.98	1.4
Portugal	Yes	2.14	6.43	1.3
Spain	Yes	2.76	12.60	1.3
South Africa	Yes	1.47	6.83	2.7
Sweden	Yes	2.67	8.51	1.7
Switzerland	Yes	3.02	8.44	1.7
United Kingdom	Yes	3.50	7.40	1.5
United States	No	2.05	9.23	1.4
<b>LDCs</b>				
Ceylon	No	1.29	6.98	1.2
Chile	No	2.41	7.25	3.0
India	Yes	1.92	8.07	1.5
Mexico	No	4.83	9.55	0.5
Peru	Yes	1.82	5.47	1.0
Philippines	Yes	2.47	5.88	2.0
Venezuela	No	2.21	8.51	0.9

Sources: International Monetary Fund, Data Fund, and *International Financial Statistics*.

<sup>1</sup> Ratio of irregular component to seasonal component.

While these tests are not conclusive evidence (the data sample is small), they suggest that speculation is greater in LDCs than in EACs. The speculative use (and manipulation) of the Korean stock market in the 1960s, with share prices rising by more than 100 per cent per annum during 1967–71 while the rate of inflation averaged 23 per cent per annum, is perhaps an extreme illustration; Brazil presents a current example. Speculation occurred in China mainly in sugar stocks in 1964, which drove the trading volume to rise to NT\$35.5 billion from NT\$10 billion in the previous year. By 1966, the volume fell to NT\$4.6 billion. In the Philippines, the commercial share price index rose from 100 in 1963 to 147 in 1968, but it collapsed to 87 in 1971 and to 64 by the end of 1972. Other striking examples of sharp stock market declines after excessive speculation include those in Colombia, in 1971, when prices of industrial shares fell by nearly one third and in Hong Kong early in 1973.

### *Government policy*

In many circumstances, the malfunction of capital markets is made even worse by the effects of government policy. Inflation substantially reduces the real yield of bonds and other assets whose yield is fixed in nominal terms; bond issues and bond markets have dried up in countries experiencing inflation. One remedy is price indexing the principal (and income) of bonds, which appears to work reasonably well but has not been used in many countries experiencing inflation. Theoretically, share prices could be expected to benefit from inflation because they offer better protection against price rises than do other financial claims. On the other hand, inflation may enhance uncertainty, shorten time horizons, create liquidity problems for firms, and otherwise operate to reduce the attractiveness of equity investment. We know of no empirical study for LDCs that demonstrates that an inflationary regime is more conducive to equity issues through the capital market than is a regime of relative price stability.

Even more serious than the effect of inflation on capital markets is the effect of government policies that peg interest rates far below their market equilibrium. This occurs in many countries for a variety of reasons but mainly because of misguided, if laudable, efforts to stimulate investment, or a desire to minimize the interest cost to the government

on its debt issue.<sup>28</sup> A low interest rate for government debt makes it unattractive to potential buyers relative to alternative uses of funds. Governments have responded in various ways—one of which extends the low interest rate (through regulation or suasion) to other financial claims. This simply makes financial assets less attractive than real assets, and also reduces the incentive to save. To protect the low new issue rate, the government has to intervene in the secondary market by pegging or restricting terms of transactions. In addition, it may force financial institutions to purchase and hold government debt through legal means or moral suasion regarding reserve requirements, asset composition, and the like. A low interest rate policy has the general effect of making it impossible to develop a viable bond market.

These characteristics of capital markets, and the conditions underlying them, provide some guidance for policies designed to develop capital markets.

### III. Measures to Develop Capital Markets

Measures to develop capital markets should aim at (1) encouraging an appropriate general economic (and political) environment and (2) specific measures that make it more attractive for suppliers (investors) to issue new securities through the market and for demanders (savers) to purchase them.

A general environment supportive of capital markets has various dimensions, including the level of development of both the economy and the financial system. It does not make much sense to rely on capital markets for resource mobilization and allocation in an economy with a low per capita income and a weak institutional structure.

Obviously, reliance on capital markets is a strategy applicable only to market economies. It is only slightly less obvious that a “market economy,” per se, does not guarantee having the appropriate economic environment. Capital markets are much affected by legal and political as well as economic factors. Does the legal system support capital markets? How are financial instruments defined? What are the rights and

<sup>28</sup> While for domestic debt this is in aggregate simply a transfer payment (although with income-distribution implications), in LDCs—where the tax base is limited and it is difficult to increase tax revenues—some real costs are involved in paying higher (market) interest rates.

obligations of issuers and holders? What are information (disclosure) requirements? How (and how well) are contracts enforced? Frequently the inherited legal system is restrictive rather than conducive; for example, in some LDCs convertible debentures are not legally defined, or are prohibited.

Many of the problems of capital market development emanate from uncertainty about the general future environment. After all, prices of stocks and bonds represent a present evaluation of their future prospects, determined not only by the behavior of the issuer but also by the environment within which it operates, including political stability, prospects for economic growth, and government economic policy. While clearly the whole range of government policy and its implementation needs to be taken into account, two aspects deserve special mention: inflation and interest rate policy.

As noted earlier, the effect of inflation on stock market prices and on new issues is unclear theoretically, and we know of no empirical studies demonstrating any clear-cut positive or negative relationship. On the whole, bond markets and new bond issues are adversely affected by inflation, substantially because of institutional and policy rigidities. Most countries have usury laws that set ceiling interest rates in nominal terms at levels that usually result in negative real rates of interest when the rate of inflation goes above 15 per cent or so.

Perhaps one of the greatest problems of inflation is its actual or apparent variability in rate. Markets respond eventually to a fairly stable rate of price change; evidently, participants tend to project past stability of rates into the future. Increased uncertainty about future rates of inflation makes bonds a less attractive asset to hold, especially when normal interest rates are expected to rise with inflation; this causes a drop in the market price of bonds that carry low interest rates.

One important means of protecting bonds against inflation is to base their redemption value (and interest payments) on some appropriate index of inflation, such as the cost of living or a stable foreign currency. This protection is used in several Latin American countries (including Brazil and Chile) and also in China and Indonesia, where dollar-denominated deposits are accepted; however, such indexing has not been used in most LDCs. The advantage of this mechanism to bondholders is quite clear when there is some doubt as to the course of inflation and also to its duration. Price indexing poses difficulties for certain industries, however, because the increases in their prices may lag behind movements in the index.

One other facet of this indexing can be used for policy purposes, and that is within an inflationary situation if the authorities should decide to index certain types of financial asset, as government bonds in Brazil, or private bonds, for example. When these financial assets are indexed while other forms of financial asset, such as currency or deposits, are not, then it is possible, at least as a short-run phenomenon, to induce a change in the composition of the financial assets held by the private sector, and this might provide a temporary acceleration in the development of a capital market.

An essential condition for an effective capital market is that prices be determined freely by interaction of forces determining demand and supply. Yet the low interest rate policy pursued by governments in many LDCs conflicts with the principle and practice of freely determined market prices for securities, notably for bonds.

Interest rate policy is important in encouraging the development of a capital market through its effects on both the supply of savings and the relative attractiveness of alternative financial and real assets. Historically, the LDCs have not looked to interest rates as a tool for promoting savings. They have been more concerned with the possible adverse effects of rising or high interest rates in discouraging investment. However, during the past two decades an increasing number of developing countries have begun to raise interest rates, although they still tend, especially in real terms, to be below levels prevailing in world capital markets. The increase in pressures emanating from the rise in world market rates was probably one factor that has made developing countries change some of their attitudes. However, most governments are still concerned with the cost of credit to the government sector: as we have noted, a high interest rate policy is considered by governments as raising the cost of their borrowing, and governments are concerned that financing the government debt will be a burden on the budget.<sup>29</sup>

To keep government bond yields or treasury bill rates below those that would prevail in free markets, governments have been obliged to extend the restrictions to a wide variety of financial claims. They frequently place ceilings on lending rates and deposit rates in the private sector; some examples include Argentina, China, Colombia, Ecuador, Guatemala, India, Korea, Peru, Uruguay, the Syrian Arab Republic, and Thailand.

<sup>29</sup> For information on the relative levels of interest rates prevailing in LDCs and EACs, see U Tun Wai, *Financial Intermediaries and National Savings in Developing Countries* (New York, 1972), pp. 40-45.

These restrictions can adversely affect the bond market, if one exists. There is a fundamental conflict between a government's low interest rate policy and a free bond market. We thus find the following sequence of events.<sup>30</sup> In order to keep interest rates low on government bonds, the government basically has to force the purchase of its new issue upon financial institutions, usually through various reserve requirements (by law or moral suasion). The government cannot tolerate very active trading in government bonds at effective yields that are substantially different from the yields on new issues. Thus, it has either to peg the market, usually through central bank intervention as a buyer, or to eliminate it. Moreover, most governments seem unwilling to tolerate a free private bond market when the government bond rate is low because the difference between yields is embarrassingly great. The government then places ceilings on the yields of nongovernment bonds and attempts to restrict trading. Under such circumstances, potential bond issuers are often eager to make new issues but find few buyers. The moral is that the development of capital markets requires freedom from government attempts to control interest rates in that market.<sup>31</sup>

Within the framework of these general preconditions, governments have in principle, and in a wide range of practices, a substantial variety of policy instruments—fiscal, monetary, and regulatory—to promote capital market development. Instead of cataloging all these instruments, we have examined the main instruments that make issues of stocks and bonds more attractive to both issuer and buyer, in terms of the orthodox criteria (variables) of risk, yield, and liquidity. Policy instruments can and often do attempt to influence each of these variables separately, although often the specific instruments do (and should) affect more than one simultaneously. This is particularly true for policies encouraging the development of the secondary (trading) market, which is important in both reducing risk and enhancing liquidity. The main social purpose of the secondary market is to make new issues easier, by providing liquidity for the new shares, by providing information on the appropriate price and related terms of issue, and by reducing transactions costs.

<sup>30</sup> For one case study, see Patrick, "Finance, Capital Markets, and Economic Growth in Japan" (cited in footnote 19).

<sup>31</sup> Government restrictions on yields elsewhere—say, on savings deposits—coupled with lack of restrictions in the capital market can promote capital market development, but at the expense of the development of the restricted financial institutions. This may well be inefficient, and it probably tends to increase the inequality of income distribution.



## Risk

A standard procedure for determining the risk of an asset is to use the probable variability of its future price. Price variability is attributable to the many factors that impinge on both the success of the issuer (the risk of default, through bankruptcy or repudiation on the part of a government, implies at the lower end a zero price for the stock or bond) and the degree of perfection in the market in which the price is determined. Most of the problems of risk are associated with corporate securities, not government bonds. Of course, one way in which the government can reduce risk is to guarantee the redemption value of other securities; customarily this is done only for government-owned corporations, however. On some occasions governments have guaranteed specified dividend rates for private corporations in key industries for a certain number of years to encourage private investment; Japan's railroads in the 1880s were developed in this way. However, the use of this type of guarantee to reduce risk for corporate securities has been limited.

In LDCs the uncertainty engendered by the lack of information concerning the performance of corporations issuing securities substantially increases the subjective evaluation of risk by potential holders of securities, especially for shares. Most stock exchanges (not just in LDCs) have experienced incidences of speculative excesses and price manipulations that contribute to the lack of buyer confidence in the market. Lack of confidence is probably the most important inhibition to capital market development.

The government through its regulatory powers can do much to reduce uncertainty (and, hence, risk) by increasing information flows, by punishing those who engage in forbidden activities (manipulation of prices, use of inside information, etc.), and by related measures to enhance investor confidence. Supervision of capital markets has several dimensions: prevention of fraudulent action; improved information; and development of capital market techniques and institutions, including development of brokers and specialists, listing requirements, transactions costs, and limitation of certain types of presumably speculative activity.

Regulation and supervision do not come easily. Basic are a supportive set of laws and a legal system to provide the framework within which to operate. Equally important are the skilled, knowledgeable, and honest staff to enforce the regulations. It may be tempting to transfer the

world's most advanced set of rules, and their attendant institutions, from (e.g.) the United States or wherever they may exist. The danger of regulatory overkill, plus the large expenses of a highly sophisticated regulatory system, however, may actually inhibit capital market development. Analysis of the optimum level and degree of regulation is not attempted in this paper, but this important issue should not be ignored in any comprehensive effort to develop capital markets.

The usual process in LDCs has been for a group of traders or brokers to establish a stock exchange or a capital market under their own rules and regulations for its functioning. This occurred in many Latin American countries. In postwar years there has been a greater movement for reform of capital markets. Many of the newly emerging independent nations felt it desirable that from the beginning either a securities and exchange commission or a branch or a department of the central bank should ensure that dealings in securities are not fraudulent and that sufficient information is available to the public in order to have a properly functioning capital market. Furthermore, some governments have set up a committee or authorized a government agency to establish a capital market. For example, in Jamaica a stock exchange was established in 1969 as a subsidiary of the Bank of Jamaica, and the Lagos Stock Exchange in Nigeria is supervised by the Central Bank and the Ministry of Finance. The mere creation of a council to establish a stock exchange does not mean that one can be established, however, as Zambia created such a council in 1969 and by the end of 1972 still had no stock exchange.

The regulating authorities must try to minimize speculative excesses without thereby interfering unduly with normal market activities. Since stock markets in a number of countries evolved from commodities futures markets, forward or futures trading with negligible margin requirements has been an important, even dominant, component of total trading. Several countries have recently had to respond to problems in futures markets. Because of the sharp increase in stock prices in India in 1968 and 1969, the authorities banned forward trading in shares in the last week of June 1969. As a result of this ban, share prices in the major stock exchanges in the country declined sharply through the first week of February 1970. In April 1970, new restrictions were placed on the issue of bonus shares. Under these regulations, aimed at safeguarding the interests of general investors, the Government prohibited both

bonus issues in lieu of dividends and more than two bonus issues by any company in a five-year period; it also prescribed an interval of at least 18 months between two bonus issues.

With effect from February 1, 1969, Korea abolished "future" transactions in securities and adopted a new method of transactions called regular way (cash settlement), in order to reduce speculative elements in security transactions. In January 1970, the National Assembly approved a law on the registration of public and corporate bonds to simplify the procedures for their issuance, and a savings law designed to promote the development of the capital market. These steps, however, have not yet resulted in a significant new issue or secondary market in Korea for government bonds, relative to other issues; issues of government bonds in 1970-71 accounted for less than 4 per cent of total issues. However, as shown in Table 9, government bond issues increased from negligible amounts during the period 1965-69 to W 5 billion a year in 1970, owing mainly to higher interest rates on these bonds than on bank deposits and to the advantages of the tax-free features and the anonymity of bearer bonds.

In June 1971, as part of the Korean Government's program to develop capital markets, the Korea Investment Finance Corporation (KIFC) was established with financial assistance from the International Finance Corporation (IFC). The KIFC has begun buying and selling securities issued by other institutions, and it plans shortly to issue its own securities.

In Malaysia during 1968, in order to curb excessive speculative activity in the market, the capital issues commission, with the cooperation of some stock exchange members, restricted trading in new share issues. One function of the capital issues commission is to ensure that the public is provided with adequate information about companies seeking capital. With effect from January 21, 1970, the stock exchange authorities in Malaysia banned delayed dealings in 17 industrial securities with an issued capital of M\$5 million (or S\$5 million) or less, and altogether suspended dealings in the over-the-counter market. In 1971 several improvements were introduced requiring companies seeking listing on the stock exchange to disclose more information and allowing private placements to be handled by financial institutions.

A capital market, in any developed sense, does not exist in Iran. Since an organized stock exchange was new in Iran, and the people

were not aware of its functions and benefits, its operations were begun rather cautiously in February 1967. Only banks were chosen as brokers, and the selection of companies whose shares could be listed proceeded slowly. The bourse may not have developed rapidly because of the stringent rules that were laid down in order to have securities listed; however, its operations seem to have been conducted safely and there has been no fraud.

In 1970, the Chinese Government established uniform accounting procedures and auditing of public corporations. The Securities and Exchange Committee required that financial statements of companies had to be certified by registered accountants before they could be made public.

In Indonesia, the Money and Capital Market Institution was established in January 1972 with a council under the chairmanship of the governor of Bank Indonesia. Regulations governing the sale of securities have been drafted to expedite the turnover, and other studies are in progress in conjunction with the IFC on ways and means of developing the money and capital markets in Indonesia.

In Turkey, the capital market plays only a limited role, even though the shares from the portfolio of the Industrial Development Bank are popular and a few private companies have issued equity shares on the stock market. Open-end investment funds are not allowed by law, and most of the capital stock of companies is family controlled. Furthermore, there are tax disadvantages in equity ownership. The authorities have been studying a new capital market bill for many years.

Regulation to reduce risk for purchasers of stock by increasing the flow of information through disclosure requirements and the like, however, is in direct conflict with the perceived interests of corporate securities issues. This poses a serious problem, since one of the greatest difficulties in capital market development is the unwillingness of many firms to list their shares. Typically, they are family owned; the owners want absolute control and absolute independence of action, and they value privacy and secrecy highly (both for fear of revealing damaging information to competitors and for personal reasons). Frequently the firms have sufficiently good banking connections that an "adequate" rate of expansion can be financed from retained earnings plus bank loans. Sometimes firms appear willing to forgo more rapid expansion if the price to be paid is the public issue of securities with all its requirements for disclosure of information. Normally, public issue does not result in

loss of family control, but it does reduce independence of action, since management is accountable to a potentially questioning set of public securities holders as well as to the family.

One possible solution to this dilemma would be through regulation: all firms above a certain size would be required to go public, that is, to have the shares listed on a stock exchange and to have a certain proportion of their shares held publicly. This apparently runs so contrary to concepts of the rights of private ownership in market-oriented economies—concepts that the capital market presumably embodies—that to our knowledge no country has used its regulatory powers in this manner. Rather, government policy has attempted to induce firms to go public by various measures, mainly fiscal, to reduce their costs to issuers. It has been the carrot more than the stick—and carrots that tend to benefit both issuer and buyer rather than to put them in opposition.

#### YIELD

The yield of a new securities issue to a buyer is its cost (*plus* issuance costs) to the issuer. An important component of government efforts for capital market development has focused on measures that drive a wedge between this cost/yield equality, either by lowering effective costs without lowering yields or by raising effective yields without raising costs. Essentially, all techniques involve tax incentives to issuance and purchase of securities. Certain of these incentives can cause large increases (decreases) in effective yields (costs).

A common way to increase the effective yield to buyers is to set lower (at the zero limit) personal (or corporate) income tax rates on bond interest received, on dividends, and on capital gains from the sale of securities. A number of countries (e.g., Ecuador and Sudan) grant tax exemption to interest on government bonds, and capital gains frequently receive favorable tax treatment. How effective these measures are depends on the effective marginal income tax rates of securities holders (who tend to be in relatively high income brackets).

A much more substantial tax benefit to purchasers of securities results from systems whereby purchasers of (certain types of) securities can deduct part of that purchase from their gross income, or even from their tax liability. This approach has been used in Brazil since 1965. Individual taxpayers have been allowed to deduct from taxable income 30 per cent of the cost of purchasing new shares of "open-capital" (public) companies or government-guaranteed housing bonds and 15

per cent for mutual shares. Thus, an individual in the 50 per cent marginal tax bracket could, in effect, purchase new stock issues at 85 per cent of their cost, with the Government bearing the remaining 15 per cent of their cost in tax revenues forgone. A much stronger provision (referred to as Decree-Law No. 157 of 1967, to be discussed later) has allowed the use of certain percentages of personal income tax liabilities and of corporate profits tax liabilities to purchase shares of special mutual funds. After two years the owners can sell their shares in installments over a further two-year period. Here, the yield to the purchaser is infinite, since all the funds otherwise would have gone to the government as taxes.

Similar, although perhaps less extensive, tax incentives are applied to corporations to reduce their costs of securities issues. These incentives are usually applied more to stock than to bond issues. Of course, in all countries the interest paid on bonds is treated as a deductible business expense, but so is interest paid on loans; the impact is neutral between these two types of liability. The main effect is to make bond issues relatively more attractive than stock issues, since dividends are not considered a business expense that reduces corporate taxable income. Some governments have tried to redress this imbalance by assessing lower rates of corporate profits tax on the amount paid out as dividends.<sup>32</sup>

The main problem is to induce firms to list their shares on an exchange and to sell an "adequate" proportion (a minority share, typically) to the public. The main fiscal incentive is to tax the profits of such public, or open-capital, companies at a rate that is sufficiently lower than that on privately held corporations to induce firms to go public. This incentive has been particularly effective in Brazil but much less so in Korea and elsewhere. In Korea, other factors, such as inadequate accounting standards, which prevent the true net worth of private firms from being publicized, may have prevented these firms from going public.

These tax-incentive programs to increase yields and to lower costs on securities issues are expensive in terms both of the government revenues forgone and of increasing the inequality of income distribution. Presumably the opportunity cost of government revenues is high. The government has either to impose other taxes in equal offsetting amounts to reach its revenue goals, or to reduce its expenditure programs. Tax

<sup>32</sup> This tax treatment conflicts with policies to increase corporate savings by retention of profits; indeed, some tax systems have lower tax rates on retained earnings than on those paid out as dividends. Taxes on dividends may raise the aggregate savings rate more.

incentives for the issue and purchase of securities predominantly benefit the wealthy. It is unlikely that the other taxes imposed, or expenditures curtailed, bear nearly so much on the wealthy as on the poorer components of society.

## LIQUIDITY

The liquidity for new and previously issued securities is provided by the secondary (trading) market. Holders of financial assets place considerable value on being able to convert those assets into cash in a short period of time without substantial reduction in price solely because of the need to sell. The secondary market makes it possible for the holder of securities to have liquidity based on marketability rather than on some early maturity date for redemption, while it enables issuers to sell financial liabilities of a long maturity (effectively infinite for shares). In other words, the market intermediates between the desires of asset holders for liquidity and of issuers for illiquidity (long redemption date) for their securities.

The government can do much to improve the technical operations of the capital market through regulation and institutional development. In its institution building it can go beyond the capital market to financial institutions that might desire to hold stocks and/or bonds in their asset portfolios. In the most positive sense, the government can help to create new institutions—pension funds, mutual funds, investment bankers, underwriters—by assisting in training, capital subscription, etc. Yet, probably the most important impact on the capital market lies in the nature of government regulation of the asset portfolios of various classes of financial institution. Such regulation historically has objectives other than capital market development: protection of the holders of the institution's liabilities (hence, ceilings on the proportions of shares in portfolios of savings and loan associations, insurance companies, banks, etc., or insistence on certain minimum proportions in safe government debt); implementation of monetary policy, through secondary reserve requirements; minimization of the cost of government debt. If capital markets are to be encouraged, then the government should re-evaluate the weight it gives to all its goals in regulating the assets of financial institutions.

Central banks can take measures to enhance the liquidity of securities, directly or indirectly. One device is to make securities eligible as collateral for central bank loans to commercial banks. While ordinarily

this eligibility has been restricted to government bonds, in principle it could be extended to corporate bonds and even to shares, as long as it remained clear that the risk remained with the borrowing institution. The main objection to such an extension of eligibility is really a criticism of capital market development, per se: it would unfairly benefit the large firms with listed securities, to the detriment of smaller firms unable to issue their securities publicly.

A more common practice is for the central bank to participate in the capital market as a buyer and seller, usually only for government debt. In almost all LDCs this does not resemble U.S. open market operations for purposes of monetary policy. Rather, it is designed to develop the bond market or to support a low interest rate policy. For example, in the Philippines the Central Bank has helped to create a market in treasury bills by inaugurating market trading in them. Sometimes, as in Malawi and Nigeria, the central bank helps to create the market by absorbing an unsubscribed portion of new issues, later selling them to financial institutions, and by arranging for purchases and sales between new issues. To some extent these practices may aim to support the interest rate structure rather than to encourage a free market in government debt.

The commitment of a central bank to purchase a bond at a stipulated price upon demand increases the bond's liquidity, eliminates the risk of price decline, and makes clear what the exact yield is, thus substantially increasing the bond's attractiveness. The crucial issue is the interest rate (effective yield) at which the bond price is pegged. If it is substantially below the market equilibrium rate, it inhibits capital market development rather than encouraging it. Unfortunately, in most countries government debt has been pegged at rates below the market rate.

This situation does not have to exist, nor does central bank support have to be limited to government debt, as is evidenced by the development of the *financieras* in Mexico. They issue medium-term bonds (5–10 years) with high interest rates (8–11 per cent), which actually are redeemable upon demand. This practice is aided by a liberal lending guarantee policy of the central bank, analogous to pegging. The high yield, low risk, and high liquidity of these bonds makes them attractive to individual and institutional investors; in fact, they have become an important source of long-term funds.

Although these central bank activities customarily have been restricted to bonds, in recent years the central bank of Japan intervened



directly in a stock market decline by lending funds to a newly created institution whose function was to purchase equities in the market. No doubt central banks have lent to financial institutions in lieu of their having to sell shares from their portfolio in a declining market. In Pakistan, the Investment Corporation of Pakistan conducts open market operations in stocks to stabilize their prices. Brazil was a recent recipient of government support for the equities market.

### THE BRAZILIAN EXPERIENCE

Since 1964 Brazil has presented a most comprehensive and intensive example of authorities actively encouraging capital market development. The economic goals pursued by the Government were stabilization and then rapid economic development. In economic policy, the Government has placed great emphasis on the financial system, including the capital market, as an important means of increasing the aggregate savings rate and efficient allocation of savings for long-term investment purposes. To accomplish this, the Government has developed a comprehensive program, with extraordinary incentives, of financial reform and development, aimed at drastically improving the attractiveness of virtually all financial assets to both their holders and their issuers, together with substantial institution building.<sup>33</sup>

One major feature of the Brazilian capital market development effort has been broadly defined as institution building. A wide range of new legislation has been enacted. Investment banks have been established, emanating mainly from pre-existing finance companies that engaged in short-term loans and deposits; they underwrite new issues, establish and manage both the tax-financed (under Decree-Law 157) and voluntary (private) mutual funds, and accept longer-term deposits and make longer-term loans. Fundo de Desenvolvimento do Mercado de Capitais, a government fund to help to underwrite new issues, is being established with aid from the World Bank and the U.S. Agency for Interna-

<sup>33</sup> Although they may not agree with our comments, our discussion relies heavily on Walter L. Ness, Jr., *Financial Markets Innovation as a Development Strategy: Initial Results from the Brazilian Experience*, New York University Graduate School of Business Administration, Working Paper Series, No. 72-25 (New York, 1972); David M. Trubek, "Law, Planning, and the Development of the Brazilian Capital Market," New York University Institute of Finance, *The Bulletin*, No. 72-73 (April 1971); Banco de Investimento do Brasil (BIB), *Bi-Monthly Review*, Vol. 2 (February 1972); and Bolsa de Valores do Rio de Janeiro, *Avaliação Crítica dos Incentivos ao Mercado de Capitais*, 1970.

tional Development as well as Brazilian official fundings. New brokerage firms have been established and provided with seats on the exchanges. Commissions and terms of trading have been regulated. Disclosure requirements for listed companies have been tightened, and financial statements are now required (although most of them are not subject to independent audit). Firms are now allowed to issue convertible debentures, an instrument new to Brazil. Insurance companies are allowed to hold part of their reserves in shares of selected, widely traded companies. In July 1971 the Social Integration Fund, a government retirement program for workers that is financed by corporate sales and income taxes, began operations; this Fund can invest in securities.

The most important measures, however, have been directed at increasing the absolute and relative effective yields of stocks and bonds to their holders. The yield from speculation in foreign exchange was reduced by shifting from an occasional large devaluation to frequent mini-devaluations, and in real estate by taxing more than a certain number of transactions annually. These measures apparently have attracted investor interest and funds into the newly burgeoning capital market.

Bonds have been made attractive assets by applying to them the principle of monetary correction (price indexing based on cost of living or exchange rate indices). Initially restricted to government bonds, the principle of monetary correction has been expanded to include corporate bonds and virtually all other financial claims, including time and savings deposits. Since inflation has continued at about 20 per cent per annum (far below the rates in the early 1960s), monetary correction provides these financial assets with a positive effective yield of 4 to 7 per cent (depending upon maturity), whereas previously yields were negatively large. To encourage the purchase of longer maturities, the tax rate on interest has been made inversely proportional to maturity. Convertible debentures are also subject to monetary correction.

The most powerful tax incentives have been provided to the stock market. As stated earlier, part of the purchase cost of shares has been subtractable from taxable income since 1965. The really operative measure, setting off a subsequent stock market boom, was Decree-Law No. 157 of 1967, which allowed individuals and corporations to divert part of their tax liabilities into mutual funds (referred to hereinafter as "157 funds"), the share of which could then be sold after an interval of 2-4 years. An amendment in 1969 increased the individual portion to 12 per cent, from 10 per cent, of his tax liability but gradually elimi-

nated corporate participation by 1971 (decreasing from 5 per cent of tax liabilities in 1968 to 3 per cent in 1969 and to a final 1 per cent in 1970). In April 1972 a new statute raised the tax credit rate to a maximum of 24 per cent for those with gross incomes of less than about \$4,000, with the tax offset decreasing on a sliding scale to 12 per cent for those with income in excess of \$14,000; moreover, the investment in 157 funds appears to have been made compulsory. The 157 funds were to invest two thirds of these monies in new stock issues of listed, open-capital firms, while the remainder could be used to purchase previously listed shares in the secondary market; these limitations were eased later.

Tax incentives were also given to encourage companies to go public (i.e., become open-capital companies). Open-capital companies were to withhold no income tax on dividends to known stockholders and 15 per cent on dividends to nonidentified stockholders; closed companies had to withhold 25 per cent and also had to pay a tax of 5 per cent on dividends declared. Dividends of up to 6 per cent of the par value of the shares of open-capital companies that were sold to 157 funds could be deducted as a business expense. The Government has not limited its efforts to foster the capital market to fiscal measures alone. Since 1968, insurance companies have been permitted to include stocks and debentures in the portfolios of their technical reserves. In 1970 the Government permitted commercial banks to act as intermediaries in selling stocks.

The results of these measures for Brazil's capital market have been remarkable, especially for the stock market. The public issue market for government bonds and government-guaranteed housing bonds has grown steadily, if rather modestly, from virtually nothing in the early 1960s to 0.8 per cent of GNP by 1968 and to 1 per cent by 1970. The main impetus has come from their protection against inflation through price indexing, abetted by higher interest rates and more favorable tax treatment than for shorter-term financial assets. On the other hand, the corporate bond issue market has not developed; there have been only a few issues, small in amount, and convertible debentures are only beginning. Corporations seem to have been wary of issuing bonds with monetary correction, fearing that their prices for outputs and inputs might deviate significantly from the average price index used for monetary correction and might not give adequate protection from inflation.<sup>34</sup>

<sup>34</sup> Ness, *op. cit.*, p. 9.

Moreover, the stock market boom since mid-1968 has made it easy to issue shares, and on increasingly attractive terms for the issuer.

During the stock market boom, from mid-1967 to mid-1971, stock prices increased on average some 22 times,<sup>35</sup> while the cost of living index for Rio de Janeiro went up about 1.2 times. Ness's estimates of price/earnings ratios for blue-chip companies, which had ranged from 5 to 7 during the period 1955-60 and had reached a low of less than 4 in mid-1967 owing to uncertainties engendered by the Government's stabilization program, some cost-push inflation, and political unrest, rose rapidly in the boom to a peak of about 28. Even recently, Brazilian shares continue to sell at price/earnings ratios that are among the highest in the world. The annual volume of transactions on the two major exchanges—Rio de Janeiro and São Paulo—has increased some 60 times in (cruzeiro) value terms and 17 times in number of shares.

The initial impetus to this boom was provided predominantly by the tax incentives that make considerable monies available to the 157 funds. Corporate public offerings increased from 4 per cent of investment in 1968 to 14 per cent in 1971, while total new issues (public and private) increased from 28 per cent of investment to 36 per cent during the same period. Much of the growth of investor demand has been channeled through mutual funds, the number of which increased from 12 at the end of 1968 to 165 by the end of 1971. Two thirds of the increase in mutual fund monies in 1968 was for the 157 funds. Since stock prices began to rise, investors have increased their participation in the market, so that by the end of 1971 ordinary mutual funds had about seven times the assets of the 157 funds. The pump-priming effect of the tax benefits granted under Decree-Law 157 on the stock market boom has indeed been considerable, especially in 1971.

The stock market boom, together with the tax incentives to go public, has resulted in a substantial increase in the number of companies listed and traded (250 in 1971 for the São Paulo exchange compared with 50 in 1968, and 120 for the Rio de Janeiro exchange compared with 43) and also in the new share offerings of the listed companies. The data available to us do not differentiate clearly between new shares sold by firms and by previously existing stockholders at the time of listing; thus, the extent of new issue is exaggerated.

<sup>35</sup> On the S-N index—better than the Rio de Janeiro stock exchange index, which is highly influenced by a single, very volatile stock, BIB, *op. cit.*, p. 4.

It also appears that financial intermediation through the capital market has increased substantially. Total new stock issues, both privately and publicly sold, averaged about 3.1 per cent of gross domestic product (GDP) between 1954 and 1960 and declined to 2.6 per cent in the early 1960s.<sup>36</sup> The ratio, 4.8 per cent by 1968, increased to 6.4 per cent by 1971. More important, the new corporate issues that were underwritten or otherwise sold publicly through the market increased from virtually nothing in the mid-1960s to about 15 per cent in 1968 and to almost 40 per cent by 1971. Relative to GDP, public offerings rose from 0.7 per cent in 1968 to 2.5 per cent in 1971.

This may be all well and good for the capital market and its participants per se, but what can be said in terms of the developmental criteria of raising the aggregate saving rate and allocating savings more efficiently among investment alternatives? The share of investment in GDP, according to the national income accounts, has *decreased* somewhat from the 1962–64 average of 19.2 per cent, although it rose from the low of 15.2 per cent in 1966–67 to 18.3 per cent in 1970–71. This might seem to indicate that the comprehensive efforts to develop the capital market have not helped to increase investment and output. But, of course, one does not know whether the low investment rates in 1966–67 would have continued but for the efforts made to develop the capital market. Then again, it must be kept in mind that since 1965 the authorities have been accumulating foreign exchange reserves that averaged 4.1 per cent of domestic investment during the period 1965–71 and 9.9 per cent in 1969 (1.7 per cent of GDP). Nevertheless, it seems likely that firms have simply substituted equity issues for short-term and long-term borrowing and savers have apparently substituted purchases of corporate equities (and government bonds, to some extent) for other forms of savings.

These aggregate data do not go far in telling us whether the efficiency of allocation has been improved; micro studies are essential for evaluating this issue. There is some presumption that allocation has been more efficient—at least among large firms in various industries, if not between large and small firms. Growth of real GDP has done well (averaging about 10 per cent for the past three years). The incremental capital/output ratio has fallen to about 2.0, far below the 6.4 of the unsettled period 1962–65 and even below the ratio of 2.5 for the

<sup>36</sup> Ness, *op. cit.* Relative to GNP, the percentages are higher (see Tables 1, 2, and 8 for information on total securities issues in relation to GNP).

period 1948–61. It is unclear, however, to what extent this reflects more adequate and fuller use of previously developed capacity rather than more efficient allocation of investment.<sup>37</sup> One criticism in Brazil, that the stock market boom has led to speculative investment, appears to confuse financial and real investment; 52.6 per cent of the value of new public offerings of shares in 1971 was made by manufacturing firms, 17.2 per cent by electric power, 15.6 per cent by financial institutions, and 14.6 per cent divided among the remaining industrial sectors.<sup>38</sup> There is no evidence that these firms have been using the funds obtained from stock issues for speculative activities.

The relationship of capital market development to distribution of income is sometimes questioned. In the early stages of capital market development, it is likely that the benefits may accrue more to the upper classes than to the lower strata of society. But in later stages, when stocks and shares have widespread appeal, capital market institutions can play an important role in encouraging savings and in affording greater public participation in the profits of industrialization and more rapid growth.

In Brazil, the growth of the capital market does not seem to have contributed to a more equitable redistribution of income.<sup>39</sup> The rise in stock prices relative to other prices of financial and real assets, and the capital gains from sales, have directly benefited only a narrow segment of the population. The stock market boom, however, may have dispersed ownership somewhat from the highest 5 per cent; it has attracted the so-called middle class (say, the next 15 per cent of the income distribution)—professionals, officers, bureaucrats, managers, landowners, businessmen—into portfolio investment in equities. Share ownership has not yet broadened beyond the top 20 per cent of income.

Another factor to be remembered is the opportunity cost of tax revenues forgone in promoting the development of a capital market in Brazil. It is difficult to reach a judgment in this matter, as only society can decide whether the trade-off was worthwhile. Nevertheless, the Brazilian experience indicates that care must be exercised by other LDCs in using tax incentives. Benefits in Brazil have been considerable, but there have been costs as well; clearly, much more intensive analysis of

<sup>37</sup> *Ibid.*, p. 21.

<sup>38</sup> *O Globo* (Rio de Janeiro), March 17–24, 1972, p. 82.

<sup>39</sup> Robert S. McNamara, *Address to the United Nations Conference on Trade and Development*, Santiago, Chile, April 14, 1972 (p. 4).

Albert Fishlow, "Brazilian Size Distribution of Income," American Economic Association, *Papers and Proceedings of the Eighty-fourth Annual Meeting (The American Economic Review*, Vol. LXII, May 1972), pp. 391–402.

the Brazilian case is needed before it can be evaluated properly. The bond issue market certainly appears to have developed well, at least for government-related debt. The incentives that have been provided to the stock market and its development have led to an initial rate of capital market growth that could not be expected to be sustained. In fact, new issues in 1972 were much below the level in 1971.

Despite the gains made, it is apparent that a strong, self-sustained capital market has not yet been established and that the wide movements in stock prices have led the authorities to adopt offsetting measures. In June 1971, concern over excessive speculation led the Government to take action to control the term market. Stockbrokers were forbidden to sell short, and the margin requirement on forward purchases was raised to 40 per cent in cash and 20 per cent in securities, compared with the previous requirement of 20 per cent in cash and 40 per cent in securities. The stock exchange in Rio de Janeiro also tightened regulations on delivery and financial settlements of transactions. These measures led to a reduction in the volume of trading in the third quarter of 1971. Meanwhile, the boom in the first half of that year led to an increase of new issues, which contributed to the market downturn. (New issues in the second half amounted to Cr\$1,993 million, compared with Cr\$323 million in the first half of 1971 and Cr\$343 million in the whole of 1970.) As a result of these developments, stock prices fell by about 35 per cent in the second half of 1971. The Government, being concerned, took action in November 1971 by liberalizing margin requirements to 15 per cent in cash and 45 per cent in securities. As the downturn continued in the first half of 1972, the authorities took a number of measures including (a) strict control by the Central Bank over new issues, (b) fuller liberalization of margin (to be totally in securities for shares registered after April 1970), (c) increased tax exemptions for individuals under Decree-Law 157 (up to 24 per cent under a progressive scale), and (d) liberalization of rules governing 157 funds. Despite these measures, the market continued to drop in the first half of 1972 by another 35-40 per cent, and it recovered only in the last quarter of 1972.

#### IV. Concluding Remarks

Our survey of the available evidence on existing capital markets in LDCs indicates that, over all, their developmental impact has been small.

Except for contemporary Brazil, the countries in our sample that have a relatively high ratio of securities issues also have small capital markets. Almost all the new issues in those countries are placed privately—government bonds to financial institutions and corporate securities either through the formation of new, private companies or to the few existing stockholders. In the aggregate, public issues, by underwriting or other means, through the capital market simply are not quantitatively important; only the government and a few large companies benefit.

The Brazilian Government's program of capital market development since 1967 is unique in its comprehensiveness, intensity, and use of imagination. Its long-run effects have yet to be determined, however. There are costs and benefits in all policy measures. While benefits have been more clearly evident in the Brazilian experience, the costs—such as the opportunity cost of the tax revenues forgone—may not be so easily quantifiable or assessed. The Brazilian program has substantially increased the flow of savings through the capital market, but the levels of investment in 1970–71 are still below the peaks in 1962–64. The rate of saving may have been both prevented from falling and stabilized, especially if the increase in foreign exchange reserves is considered as part of national savings. It appears that the main favorable effect on development lies in more efficient allocation of funds for corporate investment—although this needs to be verified by micro studies.

It is difficult to believe that issues of stocks and bonds through capital markets will become *the* panacea for capital formation and economic development in the LDCs in the decade of the 1970s. Capital markets can play a positive role in development, but it will be initially modest and only gradually increasing. It is unlikely that new issues through the market will become the main channel, or even an important channel, for raising and allocating those savings in financial form, much less for total savings. Rapid economic development can occur, however, without the presence of capital markets. Certain market-oriented EACs and contemporary LDCs (such as China, Ivory Coast, and Korea), in which the role of public issues has been negligible, suggest that capital markets are not a necessary condition for economic development. An important reason is the existence of important alternative means of financing fixed investment that in effect are close substitutes for issues of stocks and bonds. One alternative is financial intermediation, particularly by institutions that attract long-term deposits with adequate interest yields and that allocate long-term loans by com-



petitive loan interest rates. Another alternative is self-finance, although it is unclear how close a substitute it is for stocks and bonds.

Our study has drawn attention to the dangers of expecting capital markets (as we have defined them) to have a sizable and rapidly increasing effect on the process of development in the LDCs in the foreseeable future. This does not imply that policies to develop capital markets should not be used, but it should be recognized that their effects are limited.

We support a positive and comprehensive but gradualist approach to capital market development by the government authorities. Supply-leading policies, to be effective for long-run institutional development, can only slightly lead the growth in market demand for financial services. Vigorous capital markets can exist only in a supportive social, political, and legal as well as economic environment. Interest rates and effective yields on stocks and bonds must be determined by supply and demand in a competitive market place; pegging interest rates below their market equilibrium levels dooms capital market development.

It appears to us that the most important obstacle to capital market development in LDCs is a lack of investor confidence, especially in corporate shares. The uncertainties of the future are exacerbated for the investor by such factors as lack of information, misinformation, and insider manipulation. Although the government can do much through supervision, regulation, and training to improve capital market operations, there is a need to find an optimal degree of regulation. Excessive control may completely stifle development, not to mention the cost of establishing elaborate regulatory agencies. Most government policies aim at improving liquidity and reducing the risk and cost of transactions in the secondary market, but the developmental function of securities markets is to facilitate *new* issues.

Price indexing of bonds is an effective way to offset the negative impact of inflation on nominal yields and can virtually eliminate the risks associated with the uncertainty of future rates of inflation. It may be effective mainly for government liabilities and those of financial intermediaries that can diversify their asset portfolios. Individual firms apparently often find that the risks of differential price change rates and of official manipulation of the index are too great to make the issuance of their price-indexed bonds attractive.

The lesson that other countries may draw from the Brazilian experience is that tax incentives do provide a way of promoting capital mar-

ket development. However, care must be exercised that the incentives do not lead to an initial rate of capital market growth that cannot be sustained. Equally important, the opportunity cost of tax receipts forgone has to be given full weight in any cost-benefit analysis.

On the basis of our cross-country comparative work, it is our strong view that the most profitable line of research would lie in detailed case studies of capital markets in specific countries that seek to answer the sorts of question that we have raised in this study.<sup>40</sup> Only a fairly large sample of studies will result in a more comprehensive cross-country analysis that can yield useful insights and generalizations.

## APPENDIX

### Sources Used in Preparing Tables

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<sup>40</sup> In various footnotes throughout this text, we have alluded to analytical studies of capital markets in a few countries, notably Brazil, Mexico, Kenya, Nigeria, and Japan. In another important study, about Greece, Maniatis voices skepticism in conclusions similar to ours, George C. Maniatis, "Reliability of the Equities Market to Finance Industrial Development in Greece," *Economic Development and Cultural Change*, Vol. 19 (July 1971), pp. 598-620.

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TABLE 8. SELECTED COUNTRIES: SUPPLY OF NEW ISSUES OF SECURITIES<sup>1</sup>  
 (Cols. (1) and (2) in millions of national currency units; cols. (3)-(7), ratios in per cent)

Country	Years and Periods	M (1)	$\Delta M$ (2)	$\frac{\Delta M}{M}$ (3)	$\frac{\Delta M}{I}$ (4)	$\frac{I}{Y}$ (5)	$\frac{\Delta M}{Y}$ (6)	$\frac{M}{Y}$ (7)
Africa								
	Kenya <sup>2</sup>	1,113	266	84.41	12.85	18.90	2.71	13.61
	1967-70	1,674	342	85.01	13.57	21.07	3.02	17.02
	1970	2,178				22.28		19.23
Nigeria	1963	82	...	...	...	12.11	...	5.52
	1963-65	109	...	...	...	13.34	...	6.99
	1965	136	27	...	11.18	14.83	1.60	8.37
	1965-68 <sup>3</sup>	188 <sup>3</sup>	52	71.15	21.70	14.34	3.10	11.21
	1969-70 <sup>3</sup>	358 <sup>3</sup>	170	88.23	50.50	14.58	7.30	15.37
Asia								
	China							
	1965	...	8,871	11.76	32.35	23.12	7.82	...
	1965-69	...	9,403	10.92	25.60	24.50	6.72	...
	1969	...	3,908	0.00	15.06	25.28	2.05	...
India <sup>4</sup>	1951	...	164	-284.76	2.19	7.64	0.17	...
	1951-53	...	330	-140.83	4.26	8.04	0.34	...
	1954-58	...	4,088	78.10	30.14	11.55	3.45	...
	1959-63	...	3,818	47.97	18.49	13.01	2.34	...
	1964-67	...	4,628	78.07	19.47	11.27	2.10	...
Korea	1962	73,233				13.02		21.01
	1962-64	101,238	27,274 <sup>5</sup>	1.06 <sup>5</sup>	14.05 <sup>5</sup>	15.30	2.15 <sup>5</sup>	20.13
	1965-69	254,971	70,159	0.47	14.17	23.00	3.26	18.16
	1970-71	698,316	147,528	3.44	19.42	26.99	5.24	24.81

Malaysia	1961	...	129	87.60	13.08	16.67	2.18	...
	1961-64	...	202	83.66	16.14	18.59	3.02	...
	1965-68	...	464	92.70	26.21	18.12	4.85	...
	1969-71	...	560	88.33	29.10	16.57	4.82	...
	1971	...	750	94.00	34.44	17.90	6.16	...
Thailand <sup>6</sup>	1956	...	541	14.97	9.49	14.69	1.39	...
	1956-59	...	712	34.73	9.47	17.46	1.66	...
	1960-64	...	1,472	27.90	11.31	19.98	2.25	...
	1965-69	...	4,358	44.74	16.05	26.02	4.25	...
	1970-71	...	7,598	60.44	22.22	24.35	5.41	...
Latin America Argentina <sup>7</sup>	1951-54	...	59	98.79	25.25	19.25	4.84	...
	1955-58	...	193	98.61	37.27	18.94	7.20	...
	1959-64	...	559	44.20	17.43	20.17	3.51	...
	1965-67	...	763	69.18	9.09	18.49	1.66	...
	1968-70	...	1,165	64.87	6.97	19.32	1.35	...
Brazil	1961-64	...	441	3.45	20.17	19.56	3.95	...
	1965-67	...	3,938	9.54	44.42	16.53	6.30	...
	1968-70	...	11,397	9.07	48.44	17.62	8.53	...
Chile	1960	...	221	52.88	41.21	10.93	4.50	...
	1960-64	...	222	42.84	24.72	12.83	3.06	...
	1964	...	217	16.06	10.43	14.00	1.46	...
Colombia <sup>8</sup>	1963-66	35,434	5,522	24.94	36.72	20.78	7.63	48.96
	1966-69	60,043	10,884	-5.84	47.90	20.98	10.05	55.45
Mexico <sup>9</sup>	1950	4,701	1,158	50.35	24.12	11.82	2.85	11.58
	1950-54	6,320	875	32.22	12.70	13.40	1.65	11.24
	1955-59	12,154	1,435	29.86	8.39	15.47	1.29	10.73
	1960-64	25,222	4,447	31.01	13.57	16.68	2.30	13.60
	1965-69	75,475	12,101	41.46	23.20	18.92	4.34	24.15
	1970-71	122,410	17,824	37.53	21.37	19.08	4.08	28.01

TABLE 8 (Concluded). SELECTED COUNTRIES: SUPPLY OF NEW ISSUES OF SECURITIES<sup>1</sup>  
(Cols. (1) and (2) in millions of national currency units; cols. (3)-(7), ratios in per cent)

Country	Years and Periods	M (1)	$\frac{\Delta M}{M}$ (2)	$\frac{\Delta Mg}{\Delta M}$ (3)	$\frac{\Delta M}{I}$ (4)	$\frac{I}{Y}$ (5)	$\frac{\Delta M}{Y}$ (6)	$\frac{M}{Y}$ (7)
Venezuela	1966	20,422	2,687	-1.64	34.06	21.84	7.44	56.54
	1966-71	27,640	2,890	5.21	27.24	25.76	7.02	57.53
	1971	35,075	3,520	1.42	27.48	26.06	7.16	67.12

Sources: International Monetary Fund, *International Financial Statistics*, for gross national product and gross domestic investment. For other information, see Sources Used in Preparing Tables (in the Appendix), Nos. [2], [4], [8, 9], [13] (February 1973), [15], [23], [25] (March 1967, July 1969, February 1972), [26], [29], [33], [46, 47, 48], [54, 55, 56], [65], [69], [74, 75] (1969).

<sup>1</sup> General note for symbols:  $\Delta Mg$  = New issues of government securities

$\Delta M$  = New issues of securities

$M$  = Total value of securities outstanding

$I$  = Gross domestic investment

$Y$  = Gross national product

Changes in  $M$  may not always equal  $\Delta M$ , owing to rounding, or to occasional inconsistencies in the sources themselves, or to differences arising from averaging.

<sup>2</sup> Data for issues of securities by the nongovernment sector refer to changes in the issued capital of companies listed on the Nairobi Stock Exchange.

<sup>3</sup> Estimates based on growth in issues of securities by the government sector and the assumption that the ratio of issues by other sectors to GNP remains unchanged.

<sup>4</sup> Data refer to net investment and net national income.

<sup>5</sup> Average, 1963-64.

<sup>6</sup> Data for issues of securities by nongovernment sector refer to changes in paid-up capital of newly registered companies.

<sup>7</sup> Data for 1968-70 differ slightly from those in Table 1, mainly because issues of securities by other sectors in this table are actual, whereas in Table 1 they are based on authorizations, as in Table 6.

<sup>8</sup> Averages derived from amount of securities outstanding at the end of 1963, 1966, and 1969, and national accounts data for 1966 and 1969.

<sup>9</sup> Data relate only to fixed-income securities. The 1970-71 ratios are derived from gross domestic product, *not* gross national product.



TABLE 9. SELECTED COUNTRIES: DOMESTIC DEMAND FOR NET ISSUES OF SECURITIES<sup>1</sup>  
 (Col. (1) in millions of national currency units; cols. (2)-(7), ratios in per cent)

Country	Years and Periods	Issued by	Ratio of Each Type Bought by						
			Amount <sup>2</sup> Government <sup>3</sup> (1) (2)	CB (3)	GE (4)	PF (5)	PB (6)	PH (7)	
Africa Kenya <sup>4</sup>	1964	Government (ΔMg)		-144.85	161.03	0.00	-325.74	-18.38	
	1965-69	Government (ΔMg)	3	427.94	0.00	30.90	5.11	1.29	
	1970-71	Government (ΔMg)	150	62.44	0.00	42.60	19.79	-1.57	
		Government (ΔMg)	21	33.37	6.65	8.68	3.52	0.18	
Nigeria <sup>5</sup>	1963	Government (ΔMg)	37	8.13	70.27	9.22	84.14	0.01	
	1965-68	Government (ΔMg)	150	-0.52	16.73	-0.89	71.93	0.05	
	1969-70	Government (ΔMg)		10.50	14.62	0.67	2.23	0.05	
Asia China	1965	Government (ΔMg)	1,043	0.00	3.36	65.48	9.39	14.48	
		Other (ΔMo)	7,828	4.79	3.65	5.12	0.00	86.43	
		Total (ΔM)	8,871	4.23	0.86	12.22	1.10	77.97	
	1965-69	Government (ΔMg)	1,183	6.05	2.89	33.58	8.15	32.32	
		Other (ΔMo)	8,200	15.07	1.66	4.90	0.00	77.95	
		Total (ΔM)	9,403	13.93	2.51	8.51	1.03	72.21	
	1969	Government (ΔMg)	3,908	44.03	-28.78	-67.25	-3.57	33.21	
		Other (ΔMo)	3,908	-7.98	24.73	-7.73	0.00	98.59	
		Total (ΔM)	3,908	1.18	-8.75	-6.35	-0.74	105.50	
		Government (ΔMg)	419	—	-25.54	46.78	-3.10	-29.59	
India <sup>7</sup>		Other (ΔMo)	631	—	0.00	5.91	0.00	95.93	
		Total (ΔM)	212	—	304.10	186.89	-10.66	323.77	
	1961-65	Government (ΔMg)	2,923	10.37	74.72	38.21	-0.57	-2.29	
		Other (ΔMo)	1,131	2.89	0.37	69.54	0.11	20.77	
1966-67		Total (ΔM)	4,050	11.62	70.58	47.17	-0.36	4.14	
		Government (ΔMg)	3,445	—	6.65	50.54	-0.23	-14.24	
		Other (ΔMo)	1,102	2.82	0.00	86.34	-1.63	2.27	
		Total (ΔM)	4,547	—	53.48	59.19	-10.24	—	
Korea <sup>8</sup>		Government (ΔMg)	1,610	-0.99	74.66	20.31	5.40	0.43	
		Other (ΔMo)	27,857	36.95	4.08	5.49	1.17	56.45	
		Total (ΔM)	29,467	34.87	6.30	6.30	1.35	53.39	
	1965-69	Government (ΔMg)	331	0.12	-6.76	69.51	17.61	20.26	
	Other (ΔMo)	78,206	22.00	5.11	22.49	13.57	36.83		
	Total (ΔM)	78,537	21.91	4.89	23.20	13.89	36.13		
1970-71		Government (ΔMg)	5,068	-10.10	-8.01	-7.90	18.77	97.20	
		Other (ΔMo)	141,976	31.22	0.00	13.05	10.68	45.05	
		Total (ΔM)	147,043	30.14	-0.28	12.32	10.96	46.85	
1959	Government (ΔMg)	170	...	0.00	68.82	29.41	—		
1965-69	Government (ΔMg)	425	51.55	4.04	46.13	-0.23	—		
1970-71	Government (ΔMg)	547	61.06	0.43	34.99	0.00	—		

TABLE 9 (Concluded). SELECTED COUNTRIES: DOMESTIC DEMAND FOR NET ISSUES OF SECURITIES<sup>1</sup>  
 (Col. (1) in millions of national currency units; cols. (2)-(7), ratios in per cent)

Country	Years and Periods	Issued by	Ratio of Each Type Bought by								
			Amount : Government <sup>2</sup> (1)	Government <sup>3</sup> (2)	CB (3)	GE (4)	PF (5)	PB (6)	PH (7)		
Thailand <sup>10</sup>	1956	Government (ΔMg)	81	...	-48.15	...	...	...	43.21	...	103.70
		Other (ΔMo)	460	...	...	...	...	...	...	...	...
		Total (ΔM)	541	...	...	...	...	...	...	...	...
1965-69	Government (ΔMg)	2,063	0.48 <sup>11</sup>	27.26	...	...	...	67.74	...	4.49	
		Other (ΔMo)	2,293	...	...	...	...	...	...	...	
		Total (ΔM)	4,358	...	...	...	...	...	...	...	
1970-71	Government (ΔMg)	4,592	7.21 <sup>11</sup>	46.88	...	...	...	44.67	...	1.25	
		Other (ΔMo)	3,006	...	...	...	...	...	...	...	
		Total (ΔM)	7,598	...	...	...	...	...	...	...	
Latin America Argentina	1951-54	Government (ΔMg)	58	...	...	...	...	...	...	...	
		Other (ΔMo)	1	...	...	...	...	...	...	...	
		Total (ΔM)	59	...	6.30	85.51 <sup>12</sup>	...	...	...	...	
1955-58	Government (ΔMg)	201	...	...	...	...	...	...	...	...	
		Other (ΔMo)	1	...	...	...	...	...	...	...	
		Total (ΔM)	202	...	35.64	52.78 <sup>12</sup>	...	...	...	...	
1968-70	Government (ΔMg)	849	...	37.24	...	...	...	23.25	...	39.52	
		Other (ΔMo)	159	...	...	...	...	100.00	...	...	
		Total (ΔM)	1,008	...	31.82	...	...	41.03	...	27.15	
Chile	1960	Bonds and debentures	126	0.32	30.46	2.37	...	12.42	...	49.60	4.75
		Stocks and shares	106	12.99	57.82	...	...	11.86	...	9.60	9.04
		Total (ΔM)	233	6.10	27.69	2.22	...	12.17	...	31.34	6.71
1960-64	Bonds and debentures	128	0.13	16.69	...	...	...	14.90	...	57.50	9.30
		Stocks and shares	97	22.95	33.66	...	...	18.52	...	8.99	13.49
		Total (ΔM)	226	9.68	15.55	...	...	36.04	...	10.19	10.19
1964	Bonds and debentures	64	0.00	12.13	2.80	...	...	10.11	...	54.90	20.06
		Stocks and shares	153	19.84	18.21	...	...	32.31	...	12.99	15.60
		Total (ΔM)	218	13.98	13.66	...	...	25.75	...	25.38	16.92
Colombia <sup>14</sup>	1963-66	Government (ΔMg) <sup>15</sup>	1,377	...	40.81	...	...	11.18	...	48.01	48.01
		Other (ΔMo)	4,145	...	19.34	-9.47 <sup>16</sup>	...	53.14	...	6.65	30.34
		Total (ΔM)	5,522	...	24.69	-7.11 <sup>16</sup>	...	42.68	...	4.99	34.74
1966-69	Government (ΔMg) <sup>15</sup>	636	...	178.73	...	...	...	-82.19	...	115.19	
		Other (ΔMo)	11,520	...	27.98	-11.73 <sup>16</sup>	...	39.38	...	-1.13	24.76
		Total (ΔM)	10,884	...	19.16	9.02 <sup>16</sup>	...	48.21	...	3.61	19.48
Mexico <sup>17</sup>	1951	Government (ΔMg)	-179	...	-73.89	...	...	-13.33	...	...	...
		Other (ΔMo)	980	...	55.10	...	...	43.16	...	...	1.73

Year	Government ( $\Delta M/g$ )	Other ( $\Delta M/o$ )	Total ( $\Delta M$ )				
1965-69	5,538	6,564	12,101	...	...	...	-0.04
							3.89
							1.93
1970-71	6,690	11,134	17,824	...	...	...	100.42
							7.41
							42.32
1966	-44	2,731	2,687	13.64	6.82	4.55	29.55
				0.22	1.57	29.77	8.79
					1.71	30.33	9.42
1966-71	143	2,747	2,890	34.69	0.01	5.59	51.22
				3.16	0.01	5.11	68.52
				4.72	0.01	5.14	24.60
1971	50	3,470	3,520	96.00	-272.00	122.0	-138.0
				1.38	-5.56	2.33	15.24
				2.73	-9.35	4.03	13.07

Sources: See Sources Used in Preparing Tables (in the Appendix), General and Nos. [2], [4], [8, 9], [13] (February 1973), [15], [23], [25] (March 1967, July 1969, February 1972), [26] (1970), [29], [33], [46, 47, 48], [56], [60], [69], [74, 75].

1 General note for symbols:  $\Delta M/g$

= Net issues of government securities

$\Delta M/o$  = Net issues of securities by other sectors

$\Delta M$  = Total net issues of all securities

CB = Central bank

GF = Government enterprises

PF = Private financial institutions

PB = Private businesses

PH = Private households

2 Conceptually, the total amount under this column should equal  $\Delta M$  in Table 8, but there are differences owing to sectoring and rounding problems, and also to the existence of sinking funds of governments. The main sectoring problem is that Table 8 is the sum of domestic issues, while Table 9 is the sum of domestic holders of domestic securities, and thus foreign holders are excluded. Furthermore, the sum of the ratios in this table does not always equal 1 because of differences in recording between creditors and debtors. Foreign holders are not shown separately. (For Argentina, the amount is given in millions of new pesos, i.e., the rate that became effective on January 1, 1970.)

3 For China, includes Sino-American Development Fund Account.

4 The 1971 figures are based on net issues through September only.

5 The part of the treasury bills outstanding that was not classified by sector has been included in the holdings of private financial institutions. Government holdings include securities of state governments.

6 The ratios have been calculated on the basis of the sum of the purchasing sectors of government securities in 1969, or NT\$813 million.

7 Holdings by state and local governments are included in the category of government enterprises.

8 Private business holdings include those of government-controlled corporations but not of government enterprises.

9 Investments of the Government Employees' Provident Fund are included in the government sector, while those of other trust and provident funds are included in private financial institutions. All treasury bills not held by the Central Bank are assumed to be held by private financial institutions.

10 Issues of securities by the non-government sector ( $\Delta M/o$ ) refer to changes in paid-up capital of newly registered companies and partnerships.

11 Includes holdings of Exchange Equalization Fund.

12 Includes holdings of social security funds.

13 Includes government financial institutions.

14 Averages derived from amount of securities outstanding at the end of 1963, 1966, and 1969.

15 Including issues by government enterprises.

16 Including changes in holdings by government.

17 Refers only to fixed-income securities.

18 Central Bank purchases of variable-income securities are included with private financial institutions. Social security purchases of fixed-income securities are included under government, while purchases of variable-income securities are included with government enterprises.

TABLE 10. DEVELOPING COUNTRIES: DATE OF ESTABLISHMENT AND MEMBERSHIP IN STOCK EXCHANGES, 1965-71<sup>1</sup>

Area and Country	Name of Exchange	Date of Establishment	Number of Members	Number of Companies Quoted
<b>Africa</b>				
Kenya	Nairobi Stock Exchange	1954		65 (1970) <sup>2</sup>
Morocco	Bourse de Casablanca	November 22, 1948 <sup>3</sup>		119 (1968)
Nigeria	The Lagos Stock Exchange	1961 <sup>4</sup>		59 (1971)
Rhodesia	The Rhodesian Stock Exchange	1945	25	218
<b>Latin America</b>				
Argentina	Bolsa de Comercio de Buenos Aires	1929 <sup>5</sup>		660 (1963)
	Bolsa de Rosario			
	Bolsa de Córdoba			
	Bolsa de Mendoza			
	Bolsa de Valores do Rio de Janeiro	1895	40 (1963)	
			43 (1968)	
			120 (1971)	
			50 (1963)	
			50 (1968)	
			250 (1971)	
Brazil <sup>6</sup>	Bolsa Oficial de Valores de São Paulo	1895		
<b>Chile</b>				
Colombia	Bolsa de Comercio de Santiago	November 1893	48 (1967)	408 (1967)
	Bolsa de Bogota	1928	25	132 (1970)
	Bolsa de Medellín	1961	10	49
Jamaica	Kingston Stock Exchange			40 (1971)
Mexico	Bolsa de Valores de México	1933		400 (1965)
	Bolsa de Valores de Monterrey	1950		
	Bolsa de Valores de Guadaluajara	1960		
Paraguay	Cámara y Bolsa de Comercio de Paraguay	December 31, 1860		121 (1966)
Peru	Bolsa de Comercio de Lima			
Uruguay	Bolsa de Valores	April 21, 1947 <sup>7</sup>	97 (1958)	104 (1962)
Venezuela	Bolsa de Comercio	June 1958		34 (1958)
	Bolsa de Comercio del Estado Miranda			
<b>Asia</b>				
Ceylon	Colombo Brokers' Association	1905	6 (1971)	156 (1971) <sup>8</sup>
China	Taiwan Stock Exchange	February 1962	23 (1971)	46 (1971)
Hong Kong	Hong Kong Stock Exchange, Ltd.	1947 <sup>9</sup>	60 (1967)	71 (1967)
			57 (1969)	73 (1969)
			64 (1971)	94 (1971)
India <sup>10</sup>	Ahmedabad Stock Exchange	1894	461	132

Hyderabad Stock Exchange Ltd.	1943	36
Indore Stock Exchange	1930	15
Madras Stock Exchange Ltd.	April 1957 <sup>14</sup>	356 (1971)
Djakarta Stock Exchange	June 2, 1952	120 (1967)
Korea Stock Exchange	February 1956	50 (1971)
		55 (1972)
Pusan Stock Exchange	April 1969	
Stock Exchange of Malaysia and Singapore (Society)	1960 <sup>15</sup>	256 (1970)
Malay Stock Exchange	October 1970	5 (1970)
The Karachi Stock Exchange Ltd.	September 1947	145
Manila Stock Exchange	August 10, 1927	43 (1970)
Bangkok Stock Exchange (1963) Ltd.	1962	50 (1967)
		26 (1969)
Middle East		
Egypt <sup>17</sup>		124 (1967)
Alexandria Stock Exchange		
Bourse des Valeurs du Cairo	1953	44
The Tel-Aviv Stock Exchange Ltd.	1920	40
Bourse de Beyrouth	1873	276
Istanbul Stock Exchange		250

Sources: See Sources Used in Preparing Tables (in the Appendix), Nos. [1], [3, 4] (1971), [5, 6], [10]-[14] (inclusive), [17]-[20] (inclusive), [22], [24], [27, 28], [31, 32], [34], [49], [53], [57], [61, 62], [66, 67, 68], [70, 71], [73], [76, 77], [80], [82]-[86] (inclusive).

<sup>1</sup> Exact dates for membership and number of companies quoted on the exchanges are shown when given in the source. Otherwise, they presumably refer to the latest date available at the time of publication of the book in question.

<sup>2</sup> There were 90 issues by these 65 companies. In addition, there were 103 different kinds of government securities in Kenya, Uganda, the East African Community, and the municipality of Nairobi.

<sup>3</sup> Reorganized in 1967.

<sup>4</sup> Number of companies with new issues between 1961 and 1968. (This table is also based partly on the reply of the Lagos Stock Exchange to the questionnaire.)

<sup>5</sup> Appeared in its first form in 1854.

<sup>6</sup> There are 21 stock exchanges in Brazil, but 80 per cent of the transactions take place in the two exchanges shown in the table.

<sup>7</sup> First regulation of stock market in 1917.

<sup>8</sup> Of which, 95 are tea and rubber companies.

<sup>9</sup> Formal trading activities began in Hong Kong in 1891.

<sup>10</sup> Generally 1967. Number of listed companies on all exchanges excluding duplications was 1,559.

<sup>11</sup> Was incorporated on May 28, 1957 as a private limited company.

<sup>12</sup> It also lists 57 loans by the Government of India and the states.

<sup>13</sup> Started in June 1908 in its first form.

<sup>14</sup> Replaced the Madras Stock Exchange Association (Private) Ltd., which was established in 1937.

<sup>15</sup> Previously known as Malayan Stockbrokers Association, which was in existence in the 1930s.

<sup>16</sup> This table is based partly on the reply of the Manila Stock Exchange to the questionnaire and on its *Annual Report, 1969-70*.

<sup>17</sup> Source material is listed under the United Arab Republic.

TABLE 11. SELECTED COUNTRIES: TRANSACTIONS ON STOCK EXCHANGE, MARKET VALUE OF SECURITIES, AND RELATED RATIOS, 1963-71

(Cols. (4)-(7) in millions of national currency units; cols. (8)-(13), ratios in per cent)

Area and Country	Name of Exchange	Year	Transactions				Ratios of						
			Estimated Market Value of		Total transactions		Total transactions to		Stock trans- actions to GNP		Market value to money and quasi- money		
			Stocks and Bonds	Total stocks and bonds	Stocks	Bonds	Bank debits	Market value	GNP	Market value to GNP			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
<b>Developed Countries</b>													
<b>North America</b>													
Canada	All exchanges <sup>1</sup>	1963	139,800	3,283		65,320		0.19	1.72	1.99	11.06	304.04	866.17
		1969	213,200	8,618		175,298		0.88	4.04	7.14	18.87	267.33	764.16
	Montreal and Canadian	1971	203,300 <sup>2</sup>	6,814		54,887		0.74	3.33	10.71	9.30	218.39	560.21
		1972	242,413 <sup>2</sup>	9,106		129,603		0.85	3.75	7.32	13.95	235.49	585.68
		1963	60,000	8,874		103,000		0.24	1.78	1.90	10.55	130.49	371.74
		1969	91,500 <sup>2</sup>	1,623		147,000		0.22	1.78	2.04	13.99	114.73	327.96
		1971	94,406 <sup>2</sup>	1,596				0.17	1.69	1.71	10.41	101.41	260.14
1972	119,434 <sup>2</sup>	2,054				0.19	1.72	1.99	116.02		288.56		
<b>United States</b>													
New York	All exchanges <sup>3</sup>	1963	521,000	56,564		175,298		1.74 <sup>4</sup>			11.06	88.23	195.20
		1969	730,000	133,249		54,887		1.51	1.677	9.58	9.30	78.57	183.97
		1970	749,000	107,300		129,603		1.44	3.646	14.34	13.95	76.71	168.96
		1971	870,000	155,000		103,000		1.05	4.300	10.99	10.55	76.71	168.96
		1971				155,000		8,000	1.31	17.82	14.76	13.99	84.73
<b>Europe <sup>5</sup></b>													
Austria	Vienna	1971	1,099.6	36,519		270.3		0.04		0.26	0.06	32.59	44.15
		1969	296,935	344,825				0.30	12.29	3.17	2.38	30.54	51.27
Belgium	Brussels	1971		33,859				0.21	9.81				
		1963		1,411.7		63.5		1.27	1,348.2	2.58	0.14		
Denmark	Copenhagen	1969		4,722.3		96.9		2.15	4,625.4	4.51	0.12		
		1970		4,553.8		95.3		1.75	4,458.5	3.93	0.10		
Finland	Helsinki	1960		26.3		25.1		0.15	1.2	0.16	0.20		
		1970		77.3		62.3		0.13	15.0	0.17	0.18		
		1971		92.5		71.7		0.13	20.8	0.19	0.19		
France	Paris	1963		19,698				2.17	4.78				
		1969		42,578				1.77	5.80				
		1971		36,718				1.16	4.06				
Germany	Frankfurt	1970		11,668		8,501		0.26	3.167	1.70	1.24	20.85	38.32
		1971		16,401		11,480		0.36	4,921	2.16	1.51	42.03 <sup>4</sup>	119.28 <sup>4</sup>
Greece	Athens	1970	59,693	2,766.9		1,564.8		1.80	1,202.1	1.07	0.54	34.46 <sup>4</sup>	97.08 <sup>4</sup>
		1970	47,885 <sup>4</sup>	15,539.1		11,191.1		5.14	32.45 <sup>4</sup>	13.64	9.82		
Netherlands	Amsterdam	1971	44,104 <sup>4</sup>	17,083.0		11,042.3		5.00	38.73 <sup>4</sup>	13.34	13.34		
		1970		728 <sup>4</sup>		728 <sup>4</sup>		1.28	0.90 <sup>4</sup>	0.90 <sup>4</sup>	0.90 <sup>4</sup>		

Portugal	Lisbon	1970	2,245	2,056	189	0.63	1.22	1.12
		1971	2,703.8	2,527.4	176.4	0.62	1.34	1.26
Spain <sup>6</sup>	Madrid	1963	457.0	7.5	2.21	0.46 <sup>7</sup>	1.08	0.80
		1969	1,243.7	28.9	9.2	0.38 <sup>7</sup>	1.90	1.44
		1971	1,554.6	38.7		0.38 <sup>7</sup>	1.52	1.44
Sweden	Stockholm	1970	708			0.03	0.41	0.41
		1971	1,500			0.08	0.82	0.82
Switzerland	Zürich	1963	19,022.6 <sup>4</sup>	19,022.6		6.33 <sup>4</sup>	37.74 <sup>4</sup>	37.74 <sup>4</sup>
		1969	42,242.2 <sup>4</sup>	42,242.2		2.18 <sup>4</sup>	52.21 <sup>4</sup>	52.21 <sup>4</sup>
		1971	54,516.5 <sup>4</sup>	54,516.5		2.57 <sup>4</sup>	54.08 <sup>4</sup>	54.08 <sup>4</sup>
United Kingdom	London	1965	23,500	3,300	20,200		65.58	9.21
		1969	39,450	9,025	30,425		85.16	19.48
		1971	75,575	12,050	63,525		135.19	21.55
Other Developed Countries	Melbourne	1963	8,317	242.8	124.4	0.39	2.30	1.52
Australia		1969	30,468	1,045.1	221.6	0.36	3.91	3.08
Japan <sup>6</sup>	All exchanges	1963	7,718 <sup>4</sup>	8,235	106.68 <sup>4</sup>	3.37	34.85	32.67 <sup>4</sup>
		1969	19,030 <sup>4</sup>	18,832	157.1	3.08	31.00	31.59 <sup>4</sup>
		1971	32,884 <sup>2,4</sup>	18,675			31.26	41.07 <sup>4</sup>
Tokyo		1963	5,758	13,748	9.6	2.35	24.33	41.65 <sup>4</sup>
		1969	18,353 <sup>4</sup>	13,891	82.8	2.28	23.20	30.79 <sup>4</sup>
South Africa	Johannesburg	1963	11,660				23.06	30.47 <sup>4</sup>
		1969					102.72	257.79
Less Developed Countries	Nairobi	1966	1,121 <sup>8</sup>				13.70	59.47
Africa		1969	1,843 <sup>8</sup>				18.09	66.68
Kenya		1970	2,178 <sup>8</sup>				19.23	61.86
Morocco	Casablanca	1963	16,089	48,926			13.46	30.370
		1969					30.370	
Nigeria <sup>9</sup>	Lagos	1963	55.4	5.19	4.87	1.24	0.45	0.87
		1969	172.7	8.72	0.05	0.89	0.41	0.01
		1971	247.2	18.10	16.30	0.94	9.82	0.07
Latin America	All exchanges <sup>10</sup>	1963	3,975.8 <sup>11</sup>	986.2		2.03	1.93	12.33
Argentina	Buenos Aires	1963	1,849.0 <sup>11</sup>	327.0	287.1	0.67	1.90	10.72
		1969	2,686.6 <sup>12</sup>	576.2	267.9	0.22	0.72	3.37
Brazil	All exchanges	1963 <sup>13</sup>	116.3	86.3	30.0	0.52 <sup>7</sup>	1.22	0.91
		1969 <sup>14</sup>	2,847.0	2,464.1	382.1	0.66 <sup>7</sup>	2.16	1.87
		1971 <sup>14</sup>	28,663.0	25,564.0	3,099.0	3.18 <sup>7</sup>	12.27	10.94
Rio de Janeiro		1963	62.6	58.5	4.1	0.28	0.66	0.61
		1969	1,647.4	1,603.6	43.8	0.38	1.25	1.22
Chile	All exchanges <sup>15</sup>	1963	94.71	91.80	2.91	0.40	0.93	0.93
		1967	148.9	148.05	0.88	0.13	0.47	0.47
		1969		144.83			0.24	0.24
Santiago		1963	21,09 <sup>16</sup>	80.03	2.84	0.34	0.81	0.79
		1967	19,72 <sup>17</sup>	54.84	1.13	0.05	0.17	0.17
		1969		53.71		0.06	0.21	0.21
		1969		126.54			0.17	0.17
Colombia	All exchanges <sup>18</sup>	1963	5,235 <sup>4</sup>	668.8	431.7	0.36	1.60	1.03
		1965	7,622 <sup>4</sup>	729.1	492.1	0.27	1.22	0.82
		1969	10,266 <sup>2,4</sup>	1,238.6	570.2	0.39	1.14	1.25
		1971	8,690 <sup>2,4</sup>	1,524.0	1,280.2	0.23	1.02	1.14
		1972	8,455 <sup>2,4</sup>	2,173.0	1,825.3	0.30	1.19	1.01
		1972			347.7		4.66 <sup>1</sup>	19.12 <sup>1</sup>

TABLE 11 (Concluded). SELECTED COUNTRIES: TRANSACTIONS ON STOCK EXCHANGE, MARKET VALUE OF SECURITIES, AND RELATED RATIOS, 1963-71

(Cols. (4)-(7) in millions of national currency units; cols. (8)-(13), ratios in per cent)

Area and Country	Name of Exchange	Year	Transactions					Ratios of							
			Estimated Market Value of Total Stocks and Bonds		Total transactions to			Stock transactions to GNP		Market value to GNP		Market value to quasi-money			
			(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)			
(Colombia)	Bogotá	1963		460.4	260.9	197.3	0.25	1.10	0.62						
		1967	5,590 <sup>19,4</sup>	733.7	472.2	261.5	0.22	8.44 <sup>4</sup>	0.90	6.85 <sup>4</sup>	36.63 <sup>4</sup>				
		1969	7,686 <sup>2,4</sup>	988.7	836.9	161.8	0.21	10.89 <sup>4</sup>	0.91	7.10 <sup>4</sup>	32.14 <sup>4</sup>				
		1971	6,506 <sup>2,4</sup>	1,104.0	949.4	154.6	0.17	14.59 <sup>4</sup>	0.84	4.38 <sup>4</sup>	18.58 <sup>4</sup>				
		1972	6,330 <sup>2,4</sup>	1,527.0	1,282.7	244.3	0.21	20.26 <sup>4</sup>	0.84	3.49 <sup>4</sup>	14.31 <sup>4</sup>				
		1966	24,62 <sup>4</sup>	6.1	0.6	5.5	0.99 <sup>7</sup>	2.44 <sup>4</sup>	2.27	0.22	4.56 <sup>4</sup>	17.42 <sup>4</sup>			
Mexico	All exchanges <sup>20</sup>	1963	27.8 <sup>4</sup>	4.7	1.0	3.7	0.51 <sup>7</sup>	3.60 <sup>4</sup>	0.69	0.15	4.08 <sup>4</sup>	14.40 <sup>4</sup>			
		1963	25,721 <sup>17</sup>	25,471	228	25,243	5.01	98.04 <sup>17</sup>	13.23	0.11					
		1969	97,832 <sup>17</sup>	44,800	6,507	38,293	3.59	45.79 <sup>17</sup>	11.95	1.74					
		1971	133,480 <sup>17</sup>	48,034	900	47,134	2.70	35.99 <sup>17</sup>	10.55	0.19					
		1963	25,386	25,386	217	25,169	5.00	13.21	0.11	0.11					
		1969	35,236	35,236	1,297	33,939	2.83	9.40	0.35	0.35					
Peru	Lima	1971	38,865	38,865	831	38,034	2.18	8.53	0.18						
		1963	31.5	16.9	14.6	0.02	1.25 <sup>21</sup>	0.04	0.02	0.04					
		1968	171.6	72.3	99.2	0.04	3.06 <sup>21</sup>	0.09	0.04	0.04					
Uruguay	Montevideo	1964	206.8	206.8	35.2	171.6	0.36	0.62	0.11	0.36					
		1969	2,682.1	405.0	405.0	2,277.1	0.31	0.54	0.08						
Venezuela	All exchanges <sup>22</sup>	1963	166.0	166.0	37.6	128.4	0.22	5.45	0.13	13.48	61.16				
		1965	4,594	250.2	43.8	206.4	0.25	0.73	0.13						
		1963	100.7	100.7			0.13	0.35	0.13						
		1965	135.6	135.6			0.14	0.40	0.13						
Asia	Ceylon	Colombo	1971	2.5				0.01	0.02						
			China	Taiwan	1963	18,333	35,547	35,501	46	9.82	87.34 <sup>2</sup>	34.78	34.73	23.97	104.76
					1964	40,700 <sup>2</sup>	4,366	4,214	152	0.54	16.54 <sup>2</sup>	2.29	2.21	39.82 <sup>2</sup>	139.19 <sup>2</sup>
					1969	26,400 <sup>2</sup>	23,700	23,598	102	2.05	85.87 <sup>2</sup>	9.51	9.47	13.84 <sup>2</sup>	37.74 <sup>2</sup>
					1971	27,600 <sup>2</sup>	54,194	54,050	144	3.88		13.59	11.07 <sup>2</sup>	24.49 <sup>2</sup>	
					1972		520.7								
1963	2,546.0	3,052.0													
1970	200														
1967	65,912.5 <sup>24</sup>														
Indonesia	All exchange <sup>25</sup>	Djakarta	Korean-Seoul	1966	1,073 <sup>25</sup>	27.0	0.7	1.30	1,526.00	3.87	20.17	91.76			
				1964	30,62 <sup>4</sup>	41.9	0.3	0.50	90.52 <sup>4</sup>	4.39 <sup>4</sup>	4.39 <sup>4</sup>	48.14 <sup>4</sup>			
				1969	86,6 <sup>4</sup>	42.3	3.6	0.45	48.38 <sup>4</sup>	2.07	2.05	4.33 <sup>4</sup>	48.14 <sup>4</sup>		
				1970	97.9 <sup>4</sup>	45.7	3.6	0.45	43.00 <sup>4</sup>	1.79	1.65	12.91 <sup>4</sup>	12.91 <sup>4</sup>		
				1971	41.0	33.8	7.2	0.35	1.33	1.65	3.85 <sup>4</sup>	3.85 <sup>4</sup>	10.99		
				1970	0.6	0.6		0.01	0.02						
Korea	Pusan	1970													



Malaysia	Malaysia and Singapore	1966	226.4	0.55	2.47
		1967	419.7	0.94	4.33
		1968	858.9	1.80	8.56
		1969	1,147.5	2.13	10.45
		1971	934.0	1.58	7.57
		1971	1.0	0.00	0.01
Philippines	Malay				
	Mantila	1,347.4	185.7	0.39	1.06
		1,976.2 <sup>1</sup>	611.0	0.58	2.09
		1,173.2 <sup>2</sup>			
Thailand	Bangkok	6,969 <sup>11</sup>	16.2	0.01	0.02
		12,545 <sup>11</sup>	147.2	0.05	0.14
		1967	238.0	0.07	0.18
		1969			
Middle East	Tel Aviv	1,235.9	270.6	1.65	3.41
Israel		2,750.4	249.4	1.39	1.78
		3,548.9	272.9	1.69	1.72
		1970	3,969.1	228.8	1.18
Lebanon	Beirut	81	50.2	0.58	2.45
		60			1.06
Turkey	Istanbul	43.6	16.1	0.13	0.06
		1967	13.1	0.8	0.01
			7,890	12.3	0.02

Sources: See Sources Used in Preparing Tables (in the Appendix), General and Nos. [2], [4], [7, 8, 9], [12, 13], [15, 16], [19, 20], [22, 23], [25] (December 1964, March 1967, July 1969, February 1972), [26, 27], [29], [31], [33], [35]–[48] (inclusive), [50, 51, 52], [54, 55, 56], [58, 59, 60], [63, 64, 65, 66], [69] (1971), [71] (1963 and 1968), [72], [74, 75], [78, 79], [81], [83]. See also footnote 5.

<sup>1</sup> Calgary, Canadian, Montreal, Toronto, and Vancouver Exchanges.

<sup>2</sup> Estimate based on price indices linked to an earlier year with adjustment for growth.

<sup>3</sup> American and New York Stock Exchanges and other stock exchanges.

<sup>4</sup> Stocks only.

<sup>5</sup> In billions of national currency.

<sup>6</sup> In billions of national currency.

<sup>7</sup> Bank clearings.

<sup>8</sup> Includes value of securities not quoted on the stock exchange.

<sup>9</sup> In millions of Nigerian pounds; (This table is also based partly on the reply of the Lagos Stock Exchange to the questionnaire.)

<sup>10</sup> Buenos Aires, Rosario, Córdoba, and Mendoza Stock Exchanges.

<sup>11</sup> Government bonds only.

<sup>12</sup> Market value of shares outstanding has been estimated from the nominal value of shares outstanding and the ratio of market value to nominal value of shares traded in 1969.

<sup>13</sup> Rio de Janeiro and São Paulo Stock Exchanges.

<sup>14</sup> Rio de Janeiro, Recife, São Paulo, and Belo Horizonte Stock Exchanges.

<sup>15</sup> Santiago and Valparaíso Stock Exchanges.

<sup>16</sup> Bonds only; 1964.

<sup>17</sup> Bonds only.

<sup>18</sup> Medellín and Bogotá Stock Exchanges. The value of bonds in 1963 and 1965 was Col\$6,505 million and Col\$9,950 million, respectively.

<sup>19</sup> Capital paid, including subscriptions and dividends in shares plus legal and other reserves.

<sup>20</sup> Mexico, Monterrey, and Guadalajara Stock Exchanges.

<sup>21</sup> Ratio of nominal value of bond transactions to total nominal value of bonds.

<sup>22</sup> Caracas and Miranda Stock Exchanges.

<sup>23</sup> Bombay, Calcutta, Madras, Ahmedabad, Delhi, Hyderabad, Indore, and Bangalore.

<sup>24</sup> Of this market value, stocks were worth about Rs 16,660 million (about 25 per cent).

<sup>25</sup> Including 352 Republic of Indonesia bonds (6 per cent) and 713 Bank of Indonesia bonds (12 per cent).