



CDIE

Impact Evaluation

United States Agency for International Development

DEVELOPING THE CAPITAL MARKET IN INDIA

After more than four decades of heavy regulation and anemic growth, India's government in 1991 dramatically opened the economy to market forces and promoted modernization of financial institutions. USAID technical assistance and training complemented these policy and institutional changes, helping strengthen government oversight and increase investor confidence.

SUMMARY

- There is broad consensus on how an efficient modern stock market should operate, and the United States is the world leader in this area, regarding both market operations and government regulation. USAID/India was able to tap into this expertise and help transfer it to India.
- Reform of capital markets is critical to India's long-term development. Past reliance on government investment and bank lending has produced poor results. These practices clearly will not provide the amounts of resources necessary for rapid future growth, nor allocate them as efficiently as a capital market—the “planning office” for a market economy—can.
- Government oversight is critical to developing an efficient stock market, by requiring disclosure of relevant financial information, limiting transactions costs for securities trading, and promoting transparency of market operation.

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Companies are reluctant to disclose financial information, while brokers (who control most stock exchanges) prefer arrangements that make stock transactions non-transparent and high-cost. Disclosure and transparency are also important for avoiding the problems, such as the recent “Asia flu,” caused by excessive dependency on foreign financing through loans.

- USAID’s municipal infrastructure financing approach was innovative and has created great interest. Only time will tell whether local governments can overcome the many obstacles to general use of this promising vehicle. If it succeeds, it could channel billions of dollars into critically needed urban infrastructure

A TALE OF TWO (OR THREE) CITIES

Several days a week, one can travel to Washington from Mumbai (formerly Bombay) with a stopover in Amsterdam. Amsterdam and Mumbai have much in common. Each is a collection of islands that human effort—landfills, swamp drainage—converted into a city. Each is its country’s leading port and a bustling commercial center. Each is located in a country that is among the most densely populated in the world. At 971 persons a square mile, population density in the Netherlands is about 25 percent higher than in India. The scale is different, however. India is a vast country, while the population of the entire Netherlands is about the same as the city of Mumbai alone.

The two airports do not differ dramatically from each other. Each has the size and bustle and metal detectors and jetways common to today’s international traveler. The latest technology in aircraft is available to move people from one airport to the other. Both are the same distance (about 15 miles) from the center of the

city. It is on leaving the airport for the center city that the dramatic differences between the two cities appear.

From Amsterdam’s airport, one can take a commuter train and be at the center of the city in 20 minutes. The ride is quiet and comfortable, and passes through a mix of residential and industrial areas. Most of the residences are low-rise apartment buildings, but with an abundance of well-maintained green space and parkland. Some factories can be seen in the distance, but the more common workplaces are high-rise buildings where armies of white-collar workers directly produce nothing tangible. Like office workers elsewhere, they talk on the telephone, go to meetings, and write words on paper. The result of these efforts is sufficient for the average Dutch worker to earn about \$50,000 a year. On arrival at the center of the city, one can stroll along the streets with the same feeling of quietness; of clean, well-maintained buildings and streets; of a general pleasantness and “uncrowdedness.”

The contrast on leaving the Mumbai airport is stark. The taxi ride to downtown takes an hour unless traffic is bad. (A new traveler might try to take a train, but the massive overcrowding there would dissuade most travelers from doing this a second time.) Most of the trip runs through areas that scream poverty. The basic vision that assaults the senses is of massive overcrowding, of taxation of the infrastructure to the breaking point. Too many cars, too many people, too much pollution, and too much poverty. Some sights strain the imagination, as seeing women dressed in immaculate saris emerging from labyrinths of hovels on tidal mud flats. The bustle of people on their way to work is no less than one sees in Amsterdam. The first impression is that people work as hard in Mumbai as in Amsterdam. Yet the average Mumbai worker earns only \$1,000 a year. (This is about 50 percent more than the average for India as a whole.)

What explains the difference in the physical infrastructure that faces workers in these two cities, and the difference in productivity of the workers? Until recently, any comparison of this sort between Amsterdam and Mumbai would have seemed unreasonable. After all, the Netherlands was probably the most advanced country in the world three centuries ago. The state of its infrastructure reflects accretion over long periods of time. This is true, but the experience of some other Asian countries suggests that centuries may not be needed to make the transformation. One may also fly easily from Mumbai to Singapore, another island city where much has been reclaimed from swamp-land. Until the 1860s, Singapore was a fishing village. Even as recently as India's independence in 1947, the difference in standards of living between Singapore and Mumbai was not stark. Singapore had much of the overcrowding, slums, poor water, sewerage, and municipal services characteristic of Mumbai today. Yet in two generations, Singapore has made strides that make it comparable with Amsterdam in municipal amenities. It has a higher per capita income than the Netherlands and a longer life expectancy. How did such a rapid transformation occur? Why has Singapore been able to make it, and why has Mumbai not done so?

Issues of the amount of capital that the society invests and—more important—the efficiency of the capital investment process seem to lie at the heart of the answer to these questions. The capital market is the medium through which investment is allocated among alternative uses in a market economy. In such an economy, the capital market is the investment planning office. It decides how many resources will be available for investment by firms throughout the economy; how much, and at what cost, will be available for infrastructure investment; which companies will be able to expand and which will not. In India, the government sought to play this role for decades. The USAID capital markets development project sought to help

transfer this function from the government to the marketplace.

THE INDIA COUNTRY CONTEXT

Economic Environment

For four decades after independence, India followed a development strategy based on extensive government direction of the economy. This included broad public ownership of commercial enterprises, a requirement for government approval for new investment by large private companies, substantial protection against imports, restrictions on exports, strict limitations on foreign investment, and a government policy framework that posed strong obstacles to the development of capital markets. Most finance for investment projects was done through banks, heavily administered by the government. India's private sector was probably the most controlled in the nonsocialist world.

The decades of government control had marginalized India from the world economy. Its share of world trade was less than 0.5 percent, down from 2 percent in 1950. Government restrictions on inflows of foreign investment and capital goods deprived the country of new foreign technology. An overextended public sector did an inefficient job of allocating nearly half the country's gross investment, while government capital market regulations and controls directed much of the private sector's investment. The result was severe structural and financial imbalances, which along with low productivity growth (rather than inadequate savings) translated into weak economic growth performance. From 1950 through the 1980s GDP growth rates stayed ahead of population growth, but only barely so, and improvement in average living standards was extremely slow.

Although the rate of Indian economic growth had picked up during the 1980s from the anemic “Hindu rate of growth” of about 3.5 percent of the previous several decades, this had not prevented a growing belief that India’s self-reliant approach to development was not working. Other countries in Asia were achieving rates of economic growth and improvements in the standards of living of ordinary people that were dramatically faster than India’s.

In June 1991, in the midst of severe fiscal and external imbalances, which had generated double-digit inflation and put the country on the verge of defaulting on its external debt obligations, a new government undertook the major task of stabilizing and liberalizing the economy. Since 1991, reform of the investment, exchange-rate, and trade regimes has ended four decades of state planning and set in motion a quiet economic revolution.

After the initial economic shock of reform in fiscal year 1991 (GDP growth of only 1 percent), annual growth accelerated to 5 percent in fiscal years 1992–94, 6 percent in FY 1995, and 7 percent in FYs 1996 and 1997. Growth, now driven by exports and private investment, is accompanied by an increase in domestic savings and a sharp decline in inflation. Exports have risen significantly, and private capital inflows have increased.

Savings and Investment

India has a high savings rate. It averaged 20 percent of GDP in the 1980s and increased to 25 percent during 1993–97. The share of savings invested in financial assets is still relatively small but has been increasing rapidly—rising from 3 percent in 1971 to 6 percent in 1981 and 10 percent from 1991 through 1996. While the increase in financial assets is impressive, most savings are still held in the form of physical assets: gold, land, buildings, or commodities.

Market liberalization has been slower in the banking sector than in most of the rest of the economy. Most banks are state owned and face a number of management and organizational impediments, including strong and militant labor unions. Banks have generally offered savers low interest rates. As a result, the banking system has been receiving a declining share of incremental savings. Households have been shifting their savings away from banks and other forms of interest-paying assets and into equity markets. In 1990 (before financial reform), 75 percent of incremental financial savings went to banks and 25 percent to equity markets. In 1996, banks received 47 percent and equity markets 53 percent. The change in share of assets intermediated by the equity market is dramatic, but so is the absolute magnitude. Total assets intermediated (by both banks and equity markets) quadrupled. Even correcting for inflation, the dollar equivalent increase in total assets intermediated doubled over the period 1990–96.

Indian corporations raised domestic debt and equity totaling \$6.4 billion equivalent in 1994–95, \$8.5 billion in 1995–96, and \$9.3 billion in 1996–97. Indian companies have also been raising substantial sums on the international capital markets—\$4.7 billion in 1994–95, \$2.3 billion in 1995–96, and \$4.7 billion in 1996–97. There has been a recent and dramatic shift toward increased issuance of debt instruments. The equity/debt split was 97 percent to 3 percent in 1994–95; by 1996–97 it was 23 percent to 77 percent.

Capital Markets Institutions And Their Evolution

The Investment Regime

Before 1991, investment in the most important areas of the economy was a public sector monopoly, private investment was carefully directed, and foreign investment discouraged.

Even in areas that were not a public sector monopoly, severe licensing restrictions regulated the amount of investment a private firm could undertake. Capital markets were constrained by five particular government policies:

- The government owned and controlled almost all of the banking system and prevented foreign and domestic institutions from entering it.
- The insurance and pension fund industry was government owned and had to invest most of its assets in low-yielding government securities.
- Nearly all interest rates were set by the government, and financial institutions were directed on how they should allocate some of their investments.
- Banks had to meet high reserve requirements, and the funds were used to finance the government's fiscal deficit—in effect preempting private investment.
- Private capital markets were small and needed government approval (including government determination of price and terms) on new capital issues.

Since 1991, there has been a substantial and steady liberalization of the economy to increase the role for market forces. Most interest rates have been deregulated. Foreign investment has been permitted to enter both debt and equity markets. The private sector has been allowed to set up mutual funds. Government control of the prices of initial public offerings (IPOs) has ended. Finally, better regulation, enforced disclosure, and investor protection have greatly improved the integrity of the private capital market.

Although the changes in the last six years have been substantial, a large number of problems remain. The banking system is still predomi-

nantly government owned and inefficient. Government crowding out of private investment continues, including through (declining) reserve requirements. Investment in some sectors, mostly agribusiness, is still controlled by government, and about 800 products are reserved for production by small-scale enterprises. Numerous regulations and administrative burdens affecting capital are far from transparent and differ from state to state. On balance, however, there are few areas where private investors—domestic or foreign—cannot invest, and India's foreign investment regime now compares favorably with several East Asian countries.

Capital Market Institutions And Characteristics

The **Bombay Stock Exchange**, the oldest stock exchange in the country, was founded in 1875. It is the leading exchange in the country, and until recently accounted for about 80 percent of all stock transactions. Twenty-two other stock exchanges also operate in India, as the government has restricted the geographical reach of each of its exchanges. There are some 7,000 listed stocks, 7,000 brokers who are members of the 23 exchanges, along with an estimated 100,000 subbrokers who interface with investors, a million active traders, and perhaps 20 million citizens who hold equities in some form, usually a mutual fund.

Despite its long history and large number of listed stocks, the equity market has had major problems. The exchanges operated with high commissions, a lack of disclosure of actual transaction prices, serious paperwork problems, and unreliable clearing and settlement.

The issue of new stocks was controlled by a government agency, the **Comptroller of Capital Issues**. With a mission to ensure the quality of new IPOs, the CCI reviewed the financial situation and prospects of the issuing company, and approved the price at which the new issue

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could be offered. Because of its conservative approach, new issues frequently were sharply underpriced. This created great demand for new issues. A refinery offering by the Birla group was oversubscribed 20-fold, and its price rose quickly from 10 to 65 rupees per share after the IPO. Another offering by the Tata group was 80-fold oversubscribed. A lottery was used in such cases, with the lucky bidders winning the right to buy shares that would immediately rise sharply in price.

A number of changes since 1993 have strengthened the capital markets. One source characterizes the changes as moving the Indian equity market “from being amongst the backward of the world [as of mid-1993 or so] to one of the most modern in the world.”⁴ Four in particular have been of critical importance:

The Securities and Exchange Board of India. Established in 1992, SEBI has a dual mandate of regulating capital markets and promoting their development. Since its creation, SEBI has sought to improve the structure and functioning of stock exchanges and to ensure disclosure and investor protection. It has grown rapidly from an initial staff of 10 to a current level of 150.

The National Stock Exchange. NSE was established in 1994 as a competitor to the Bombay Stock Exchange (BSE). NSE was backed by major financial institutions, led by the Industrial Development Bank of India. The exchange introduced nationwide screen-based trading with a dish-to-satellite data transmission system that provides instant trading access to brokers anywhere in India. It spent more than \$100 million developing its system, which now has instantaneous access through more than 1,500

locations throughout the country. NSE forced BSE and other exchanges to adapt by upgrading to computerized systems and by reforming trading rules and procedures, which included increased surveillance over the capital adequacy of brokers. BSE shifted from an “open outcry” trading system to a screen-based system, making major investments in equipment, and revised its own procedures to provide transparency for investors. As a result of these reforms, total transactions costs on India’s equity markets dropped from 5 percent in mid-1993 to roughly 2.5 percent in 1997. This is still approximately double transactions costs on the New York Stock Exchange, but procedural changes in process, such as the use of a depository where securities are held in dematerialized form, are expected to reduce transactions costs further in the next several years.

Clearance, settlement, and the National Securities Depository. In mid-1996 NSE began guaranteeing execution of trades through a new clearing corporation. This removed a major risk that had always been present in the past and forced BSE to respond with improved clearance procedures. In late 1996, the National Securities Depository Limited was inaugurated. NSDL is gradually providing a means by which securities trading will take place using electronic means. An earlier proposal for a depository that would hold physical shares had been under development for several years, but the Indian securities industry decided to forgo the costs of storing physical shares and created a depository for “dematerialized” shares. Trading takes place in both physical and dematerialized shares, but SEBI now requires institutions to trade only in the latter form.

Foreign institutional investors. Since 1993, foreign institutional investors have begun to take an active interest in the Indian capital market. There are a total of 467 registered foreign institutional investors, but most are small. About 20 large foreign investors are present in the market today, including such firms as Merrill

⁴Ajay Shah and Susan Thomas. 1997. “Securities Markets: Towards Greater Efficiency.” In *India Development Report 1997*. New Delhi: Oxford University Press, 172. This source is also responsible for many insights on the role of capital markets expressed elsewhere in this paper.

Lynch, Jardine Fleming, Pioneer, CS First Boston, the Alliance Group, Lehman Brothers, and Hongkong Shanghai Bank. The number has grown gradually, as the experience of the pioneers convinced others that the Indian market provided an opportunity for placing capital with prospects for profitable investment. The foreign investors have demanded changes in practices by companies and both stock exchanges, in the direction of greater transparency and disclosure of the financial situation of companies.

The process of opening the Indian capital market has been uneven. Abolition of the Comptroller of Capital Issues in 1991 (with residual responsibility for oversight of new issues given to the Securities and Exchange Board) led to large numbers of initial public offerings in 1992–94. The number of public companies rose dramatically from 1,000 in the late 1980s to 6,000 by 1994. The historical experience of investors, whereby an IPO was an almost automatic winner, created an acceptance in the marketplace for any new issue. The liberalization of the economy led to revaluation of stock prices, and investor enthusiasm produced a speculative bubble during 1992–94. Stock prices were bid up, and prices of many new issues rose to levels simply unjustified by future earnings prospects. Some highly questionable, or outright fraudulent, financial deals were sold to an unsuspecting public. Compounding those problems was a stock market system that lacked an adequate trading, processing, settlement, payment, and registration infrastructure. The result was a major stock market crash that thoroughly spooked retail investors. At the end of 1997, stock market indices were still substantially below the peak of September 1994. Of the 6,000 listed companies, only about 1,000 had sufficient trading to justify the claim that a liquid market existed. Five hundred companies provided about two thirds of total market capitalization of \$170 billion.

Remaining Problems

In sum, major changes have been instituted since 1993: Surveillance and monitoring systems have been introduced at major stock exchanges. Capital adequacy rules for brokers have been strengthened and enforced. A national securities depository has been set up. Trade settlement and clearance has greatly improved. And the establishment of a true competitor to the Bombay Stock Exchange has sharply reduced transactions costs and improved the efficiency of the trading process.

While the capital market reforms are impressive, there are still areas that present major problems. The market has still not recovered from its skittishness about IPOs. The debt market presents the biggest problems. While there is an active debt market, the longest maturities are less than seven years. Consequently, many large Indian companies look to foreign capital markets for longer term debt and equity. On the domestic debt side the lack of a debt yield curve, and a stamp tax on debt transactions, have prevented a secondary-debt market from developing. Finally, the fact that pension funds and banks cannot invest freely in private sector debt or equity eliminates major demand from the market.

Indian capital market institutions are still not completely up to world standards. Settlement of stock transactions takes place five days after agreement, while the international standard is for settlement by the third day. The use of a securities depository has not been fully adopted. The regulators have also held back the creation of specialized products, such as index futures and other derivatives, that can add liquidity to the market.

USAID PROJECTS AND THEIR RESULTS

USAID/India has implemented three projects in the last dozen years relating to capital markets. The third of these is still under way, and was the subject of most of the Evaluation Team's work. This section describes that project, along with the two previous projects and the available information on their direct results.

The PACT Project

The Program for Acceleration of Commercial Technology, or PACT, was developed in 1985.* USAID made a \$10 million grant for commercialization of technology by business firms. The project was managed by the largest Indian investment bank, the Industrial Credit Investment Corporation of India (ICICI).

PACT promoted two ideas: external funding for R&D by venture capitalists or others, and joint development between Indian and U.S. companies. Though the project had no direct relationship with venture capital, it was used as an argument for liberalizing government policy to permit development of a venture capital industry.

The project made conditional grants to fund up to half the cost (to a maximum of \$500,000 a project) of R&D projects that were jointly carried out by U.S. and Indian companies. The funding would remain as a grant if no commercial product resulted, but up to 200 percent (later raised to 250 percent) of the cost would be repaid as royalties from sales of the commercial product that resulted.

Though PACT was only a small part of ICICI's operations (the institution had borrowed more than \$1 billion from the World Bank), the project was strongly promoted by ICICI's chairman. It also acquired substantial visibility in the Indian government, being seen as a manifestation of U.S. support for then-Prime Minister Rajiv Gandhi's push for development of Indian technology. A separate PACT unit was established in ICICI to implement the project.

At a policy level, the ICICI chairman used the enthusiasm surrounding PACT to argue that commercialization of new technologies required the establishment of a domestic venture capital industry. Venture capitalists sometimes finance high-technology companies during the early stages of their growth, usually in exchange for a share of the company's equity ownership. Venture capital had in effect been prohibited in India by a requirement that sales of equity in businesses be preceded by government approval of public trading and establishment of the price of the initial public offering.

The PACT project financed a total of 50 joint R&D projects. Of these, 35 led to a commercial use of a new technology—mostly products introduced into the U.S. market. The project supported expansion of a number of high-technology companies, some of them great successes. For example, a new mushroom-growing technology generated substantial new exports, which have risen from zero to \$6 million a year.

Despite its promotion of new technology, PACT was not a commercial success. It did not recover its costs through royalty payments. Contributing to this were a variety of problems, including difficulty in defining the specific product on which royalties were to be paid. More important, the prohibition on the use of USAID funds to acquire equity prevented PACT from benefiting from success. One company, ERA Software, had offered stock for its PACT grant that would have yielded a \$20 million profit had PACT been able to accept it.

*This project is described more fully in a previous CDIE study: James W. Fox. *Export Promotion and Investment in India*. 1993. Technical Report No. 16. Washington: USAID.

Nevertheless, some capital markets professionals (including the then-chairman of ICICI) held that the program's main contribution lay in the impetus it gave the Indian government to modify its policies on venture capital. In 1988 the Indian government altered regulations to permit the establishment of venture capital firms that could acquire equity stock in companies without the need for prior government approval and price setting. This led to the establishment of at least a dozen venture capital firms. By the end of 1993, venture funds established under the 1988 regulations had invested more than \$120 million in financing for 428 companies, most of them startup operations.

Housing Guaranty Programs

USAID has supported four housing guaranty loans in India. The first three were intended to promote the provision of housing loan finance to lower income households. The fourth, to promote financing of municipal infrastructure, is part of the Financial Institutions Reform and Expansion (FIRE) project, and is discussed separately later.

Under the Housing Guaranty Program, USAID guarantees repayment to U.S. savings and loan institutions of long-term (usually 30-year) loans made for qualifying purposes. The U.S. government guarantee thus allows commercial financing at lower interest rates and for longer maturities than would otherwise be possible. The Agency initially promoted construction of moderate-income housing through the Housing Guaranty Program, but it has gradually widened its scope to include policy reform and institution building. In India, the emphasis has been on institution building, providing long-term financing to new Indian institutions in the housing finance business.

The first Housing Guaranty Program began in 1982, providing long-term money through the Housing Development Finance Corporation.

HDFC was then a fledgling mortgage lender established by the Industrial Development Bank of India, the International Finance Corporation, and the Aga Khan Foundation. It operated as a private company. However, as with the Industrial Development Bank and the Industrial Credit Investment Corporation, its ultimate owner was the Indian government. Including a second Housing Guaranty Program, USAID support to HDFC totaled \$125 million in loan guarantees.

The third Housing Guaranty Program moved beyond HDFC to another new institution, the National Housing Bank. Created in 1987, NHB acts as both a secondary-mortgage bank and as a regulator. It does this by on-lending to housing finance companies that comply with bank guidelines.

For both institutions—the HDFC and the NHB—supported by USAID, the assistance was provided early on to a new institution. Both subsequently became important features of the housing finance landscape in India.

HDFC holds one half of all home mortgages in India. The USAID housing guaranty was the first external financing received by HDFC, and the first head of HDFC credits the USAID Housing Guaranty Program as an important catalyst that helped the finance corporation get started.

Through the National Housing Bank, the Housing Guaranty Program supported on-lending to 23 organizations involved in housing credit operations, supporting a total of \$142 million in credits to lower-income households during the period 1992–95. Altogether, the number of housing finance companies has grown to more than 200, providing over \$100 million each year in mortgage loans to Indian families. Despite these results, the National Housing Bank itself has not prospered. It suffered major losses in a financial scandal in 1992, and its future has become questionable.

Both institutions provided steps toward the creation of a long-term mortgage market. Nevertheless, both operated under the constraints presented by the Indian policy environment at the time the Housing Guaranty Programs were undertaken. The institutions supported were in the public sector. The interest rates offered by the institutions were controlled by government regulation, and a variety of procedural and legal impediments to the creation of a real secondary-mortgage market existed, and continue to exist. Limitations on the ability to foreclose on mortgages still restrict the value of mortgage financing. The HDFC seems to have adapted better to the liberalization of financial markets that has taken place over the past five years.

The FIRE Project

India's 1992 reform program included a commitment to liberalize its financial markets, to end the domination by public sector institutions, and to end government control of financial variables such as interest rates. The USAID Financial Institutions Reform and Expansion (FIRE) project was designed in 1994 to support this liberalization by providing technical assistance and training. The stated strategic objective of the project is to reform the financial sector in order to increase the mobilization of capital.

Implementation of the program has been divided into two parts, each with a separate contractor managing activities: FIRE/R, for *regulatory*, which covers government regulation and the stock market; and FIRE/D, for *debt*, which covers the debt market.

The FIRE/Regulatory Component

This component sought to improve securities market transparency, modernize systems to promote the efficiency of the capital markets,

reduce the existing high levels of risk arising from system inadequacies, improve the protection of investors, and increase the liquidity in the equity and debt markets.

FIRE/R has been managed under contract by Price Waterhouse since February 1995. The contractor prepares annual work plans for specific activities to be undertaken, in conjunction with the Indian government regulatory body, the Securities and Exchange Board. USAID reviews and approves the annual work plan. The project has a resident chief of party in Mumbai. Individual consultants and specialists are brought to India as needed for specific purposes pursuant to task orders. To date, there have been more than 30 task orders.

Price Waterhouse began by examining the general level of sophistication of the market participants through a survey of 127 people working in Indian financial institutions—SEBI, brokerages, other market intermediaries, the stock exchanges, financial training institutions, a proposed securities depository, and the Credit Rating Information Services of India. With the stated strategic objective of reforming the financial sector in order to increase the mobilization of capital, the Price Waterhouse component has addressed financial market efficiency by concentrating on seven areas: 1) reducing investment risk by shortening clearing and settlement time for secondary trades in both stocks and bonds; 2) transforming the stock exchanges and associations of various securities markets intermediaries into self-regulatory organizations; 3) developing a functioning secondary-debt market in India; 4) improving the effectiveness of the regulation of India's securities markets, with the long-term objective of reaching international standards; 5) developing risk management and increasing liquidity; 6) helping the development of India's mutual fund industry in order to broaden India's retail investor base and mobilize additional resources through the stock and bond markets; and 7) institutionalizing capital market training and research.

The FIRE project has made a significant and demonstrable impact on the development of India's financial markets. In all but one of the areas for action identified earlier, substantial improvement has taken place in the financial market. The debt market is the one area where FIRE did not achieve the intended results. Government policy and the legal regime still present a major obstacle to the development of a secondary market that provides both liquidity and price discovery. In each other area, Agency assistance was intimately involved with the process. It is not possible to separate out the contribution of the USAID project. The most important steps in the improvement in the capital markets—creation of the Securities and Exchange Board and the National Stock Exchange—were done prior to the USAID project. Nevertheless, the project did play a key role in strengthening SEBI. It provided analytical studies for the National Stock Exchange and played an important part in the creation of the depository. FIRE has also helped other exchanges think through their evolution in the rapidly changing environment.

Evidence of the FIRE project's effectiveness includes the following:

- Following substantial training and technical assistance in drafting regulations, SEBI has been established as an effective, credible regulatory agency.
- Specific institutions are in place and doing what is expected of them. They are producing the desired results in the market and for the economy through clearing and settlement, depository, better stock exchanges, better supervised market participants.
- The concept of self-regulation has begun to take root in India—a major cultural shift.

- Government agencies and private institutions have looked to the FIRE project for disinterested assistance. Both sectors have given great weight to the advice provided by the FIRE project director and consultants. Daily newspapers report developments in the capital markets that are directly related to the FIRE project.

There is evidence that the equity markets are becoming a more significant element of India's financial system. In 1996, 55 percent of the financial system's assets were intermediated through the capital markets and 45 percent through banks. In contrast, in 1990, the value of bank-intermediated assets was three times that intermediated through equity markets. This is not to suggest that the FIRE project is causally responsible for this development. But it does suggest that the FIRE project was a timely activity, undertaken when it could support and reinforce other activities under way to strengthen India's equity markets.

The FIRE/Debt Component

The project's debt component seeks to demonstrate the commercial viability of selected urban infrastructure projects. The FIRE/D component will develop a mechanism to channel private capital into the financing of municipal infrastructure projects. Further, the project will work with local governments to ensure that the municipal infrastructure investments serve households below the median income level.

The government of India estimates its infrastructure financing requirements at \$300 billion over the next decade. Traditional financing sources, tax revenues, and borrowings from international development banks will be able to raise only a fraction of that.

Traditionally, Indian cities have relied on central government grants and expertise to fund and design municipal infrastructure projects. Infrastructure investments did not have to pass a market test. Private capital, by contrast, will not flow into the financing of infrastructure unless the projects are commercially viable—that is, unless the projects generate a cash flow sufficient to repay the borrowed funds and the accrued interest. The approach taken for the project assumes that commercially viable projects can attract funding via the issuance of municipal bonds.

The ability of the project to introduce these two innovations—commercially viable municipal projects and the issuance of municipal bonds—into India will determine the success of the project. Of the two, the former has been the preoccupation of the project implementers to date. Six cities have been selected as pilot sites in which the project attempts to systematize the project cycle: planning, cost and budgeting analysis, environmental assessment, monitoring. By insisting that projects be commercially viable, the project encourages city officials to think about cost recovery, service levels, and operating efficiency. Before issuing a bond, the municipalities are examined by credit rating agencies. (The project provided technical advisers to an Indian credit rating agency.) The prospect of a low grade or a subsequent downgrade in its rating is expected to put additional pressure on city officials to manage revenues and assets wisely.

This component is a capital market development project by the fact that it adds a new financial instrument (municipal bonds) to the debt market. The project is not attempting to alter the regulatory framework or the structure of the debt market. It is perhaps accurate to say FIRE/D is a municipal water and sewage project with an innovative financing tactic—the municipal bonds. Success in demonstrating the viability of this approach might encourage additional municipalities to seek this type of fi-

ancing, catalyze changes in the regulatory framework, and add new debt vehicles.

It will be several years before the value of this activity can be judged. The first city, Ahmedabad, issued a bond supported by the project in December 1997, and USAID is working with six other localities to develop demonstration bond issues. A project in another city, Tiruppur, has a strong local private-sector participation element.

The reaction of relevant Indian organizations is encouraging. The Infrastructure Leasing and Financial Services Corporation, a project counterpart, has set up an engineering unit to pursue opportunities in infrastructure design work, including the type of investments financed under FIRE. Two organizations are expanding to offer advisory services in project financing. All three credit rating agencies are interested in municipal work.

Indian cities are taking note of bond issues as a potential source of investment financing. The first step toward debt finance of municipal projects is to have a credit rating, which may be a leading indicator of anticipated urban infrastructure projects. Ahmedabad Municipal Corporation last year received its rating—the first municipality in Asia so credited. Since then 25 other Indian cities have been rated. One can say that, at a minimum, the idea of bond-financed municipal investment has attracted a great deal of interest in India.

Whether the project will induce substantial activity will depend upon the extent to which it leads to changes in the structure of the Indian debt market. This will require major policy changes in several areas. First, the problem of government crowding-out in the bond market must be addressed and market-based pricing for debt permitted to emerge. Second, the major legal obstacles to protection of investors in the case of default by municipalities need to be addressed. Third, tariff structures for municipi-

pal services such as water and sewerage that permit servicing of debt through fees need to be established and institutionalized. These are major tasks.

ECONOMIC EFFECTS OF USAID'S CAPITAL MARKETS STRATEGY

There are two channels through which USAID assistance could have affected savings and investment in India. It could have affected the *quantity* of savings or investment, thereby producing overall effects on the amount of resources flowing through financial markets into investment by the society. Second, it could affect the *quality* of either savings or investment, thereby changing the impact that results from given levels of savings and investment. These issues are discussed in turn.

Quantitative Aspects

Development of capital markets can lead to increased national savings. Because there are easier ways to save, or higher returns to savings, individuals may choose to save more. This, however, ignores the basic behavioral consideration that savings is not an end in itself, but rather a means to financial security. A higher return on savings may eventually enable people to achieve their security goals with lower levels of new savings. Greater security of savings similarly may reduce the need for high amounts to be put aside. Economic stud-

ies shed little light on this question, and there is nothing in the Indian context that suggests experience there is unusual. In sum, there is no reason to expect that better financial markets will increase the level of national savings.

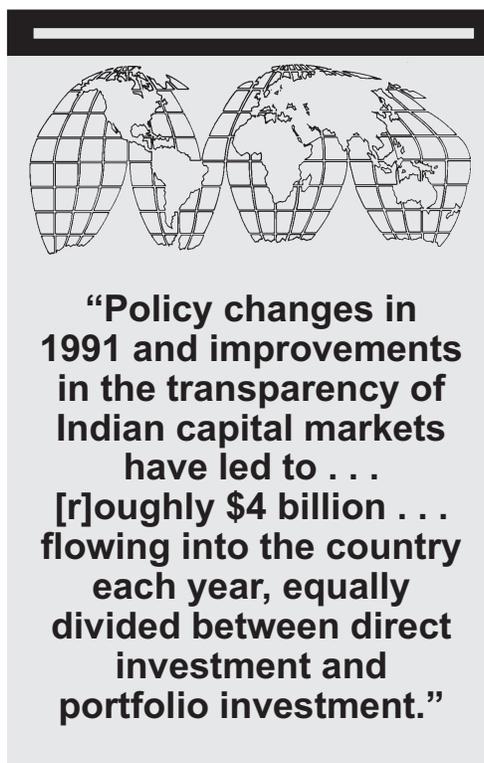
Things are different with respect to foreign sav-

ings. The amount of world savings that will flow into India depends greatly on conditions in the country. If expectations of risk-adjusted returns are higher in other countries, savers will bypass India and place their savings elsewhere.

The effect of improvements in India's capital markets on foreign savings and the more sound policy environment is unambiguously positive. Policy changes in 1991 and improvements in the transparency of Indian capital markets have led to a substantial increase in inflows of private capital. Compared with 1990, when such flows were meager,

substantial amounts of foreign capital have flowed into India in recent years. Roughly \$4 billion is flowing into the country each year, equally divided between direct investment and portfolio investment.

The USAID assistance, of course, was not responsible for the bulk of these inflows. They would have happened anyway. Nevertheless, capital markets professionals interviewed were virtually unanimous in stating that the USAID project has contributed to improving the climate for foreign capital inflows. Most talked of the project adding to their "comfort level," and one attributed a substantial portion of the capital inflows to the USAID role.



The inflow of foreign savings means that domestic capital formation will be larger, in both private and public sectors. If improvements in debt markets continue (and government policy improves), foreign financing of infrastructure will likely increase substantially.

These capital inflows are of value to India in increasing the national investment rate, but the opening of the Indian market also benefits savers in the countries from which the investment comes. That is because, according to current financial theory, an internationally diversified portfolio will reduce risk.

Qualitative Aspects

The qualitative aspects of improvements in the capital market are likely to be far larger than the quantitative ones. The reasons for this are discussed in some detail in the next section.

The primary contribution of capital markets in this area is in providing a continuous and instantaneous assessment of the value of capital in specific uses. This valuation role of the capital markets—its “price discovery” role—provides a means for signaling what is valuable and what is not. It provides a signal to banks and other lenders of the value of each listed firm that reflects the available knowledge in the marketplace.

The capital markets are likely to be particularly important in reforming India’s banking system. As the banking sector is liberalized and reformed, banks will face some serious tests. Strengthened capital adequacy norms will force banks to go to the equity market to recapitalize themselves. Disclosure requirements are forcing banks to report and to write down nonperforming loans and to mark other assets to market value. That will require substantial improvements in management by the banks, and only those that can meet the test will be able to add capital so they can grow.

What Difference Did USAID Make?

Capital markets are a quintessential private sector activity. Efficiency in capital markets involves having capital move to the highest pay-off activities and having savers receive the highest (risk-adjusted) returns. There is a monetary incentive for efficiency, so what is the role for government?

One answer is that the case for unregulated markets is based on assumptions that all actors have the same information base. In financial markets, this is often not the case. What economists call “information asymmetries” are rampant, and either the buyer or seller may have better information about the value of the asset being traded. In developed economies, government regulation has sought to reduce or eliminate such problems in two ways. First, companies are required to subject themselves to external auditing, to provide systematic financial information about the company’s operations. Company principals can be held liable for losses to investors caused by negligence or fraud in such reporting. Second, trading in stock by company “insiders” is prohibited during periods when important information about the company’s prospects has not been disclosed publicly.

Such rules of the game may not emerge naturally from the operation of market forces. The economy, and investors generally, may benefit from prohibitions on insider trading, but those most active in financial markets may lose. The self-interest of brokers may suggest that vagueness about the prices at which equities actually trade is beneficial to them, although it has an overall negative effect on the development of the capital market.

The expertise provided under the USAID project is available in the international marketplace. The Indian government or private groups could have contracted for the technical experts made

available under the project. The activities clearly benefited the Indian capital market and the Indian economy. Why did USAID need to get involved? Where was the USAID value added?

A strong consensus existed among capital markets professionals interviewed in this assessment that the USAID contributions were *time* and *disinterestedness*. The presence of the USAID advisers in Mumbai, with an extensive international network of contacts and a funding mechanism, meant that expertise on a variety of technical, legal, and regulatory issues was easily accessible.

Any technical or regulatory action in capital markets will not affect all actors in the same way. Some will be advantaged or disadvantaged relative to others by any change. Consequently, each participant in the market has an incentive to promote those changes that give him relative advantage and to oppose those that give him relative disadvantage. Thus, experts hired by participants in capital markets may not be accepted at face value. The suspicions that result lead to resistance to change and extensive negotiations over the specifics of changes. But the USAID-financed experts were widely viewed as disinterested, providing judgments on technical issues without considering (or usually even knowing) how their recommendations would affect particular market participants. In sum, USAID was able to play the role of honest broker in the Indian equities markets. This was widely recognized.

The effect of the project, then, was threefold: 1) to speed up the process of applying international expertise to technical problems in the development of the Indian capital market, 2) to provide advice that was widely regarded as objective, and consequently 3) to speed up the process of identifying and adopting technical improvements in the operation of Indian capital markets.

How much is speed worth? Market professionals concede that the USAID experts had no special knowledge. Without their involvement, the correct approach would eventually have been adopted. Governments do learn, and Indian leaders were gradually absorbing lessons from the rapid growth of East Asian economies. Nevertheless, the essential mechanism that makes rapid economic growth possible is faster institutional change. If India grows at 4 percent a year, it will eventually reach the current U.S. per capita income. If—because such change is faster, allowing more investment now—it grows at 6 percent a year, it will arrive at the U.S. per capita income generations faster.

The Asian Crisis And Capital Markets Development

The recent financial crisis in many Asian markets has raised the question of whether encouraging capital inflows from abroad is a desirable policy. Recent events suggest that “herd behavior” by foreign investors may create substantial instability in financial markets, with stock prices crashing and foreign exchange rates tumbling as foreign investors try to exit the country ahead of everyone else.

Although contagion seems to have happened to some extent—Asian markets without severe problems still experienced speculative attacks—the long-term consequences seem likely to be limited to countries where financial markets had serious undisclosed problems. In the most seriously affected countries (Indonesia, Korea, Thailand), serious financial problems that were previously undisclosed have been the major factor. The two problems of note have been financial statements by businesses that overstated earnings and hid losses and banks that have such large amounts of nonperforming loans that they undermine their financial strength. In both cases, greater transfer of the regulatory and accounting standards from the

United States would have reduced or minimized these problems. Use of internationally accepted accounting standards would have exposed problems of companies before they festered. In the banking sector, strengthening of oversight by the government regulators—notably requiring disclosure of nonperforming assets and requiring that assets be continually revalued to reflect market prices rather than historical cost—would have introduced the realism into financial statements that would have avoided large-scale unpleasant surprises.

The USAID project has promoted greater disclosure and transparency in the securities industry and an end to insider activities that undermine investor confidence in the long run. The Asian financial crisis of 1997–98 demonstrated the risks faced by companies that relied heavily on debt finance, and the utility of stock market development, both as a means of raising capital and of providing assurance to investors by requiring disclosure of financial conditions. These were precisely the kind of reforms promoted by USAID.

CAPITAL MARKETS AND POVERTY REDUCTION IN INDIA

In broad terms, USAID sought to improve the efficiency of Indian capital markets, or of the larger Indian financial system. Increased efficiency in the financial sector in turn is expected to direct financial resources into the sectors where their productivity is highest. This in turn is expected to increase the rate of economic growth. Faster economic growth is then expected to reduce poverty. The link between increases in income and reductions in poverty is empirically strongly established over the medium and long term. (For shorter periods, the two can move in opposite directions because of a variety of factors. But *extreme poverty*—the World Bank defines it as \$1 a day per person—

prevails only in countries where *average incomes* are low.)

Batchelder and Holt⁷ have drawn upon the historical experience of developing countries on the relationship between economic growth and poverty to make projections for India and other countries of future poverty levels. They provide two scenarios for India. Under the “poor policy” scenario, where government restrictions prevent free markets from operating in capital markets and foreign trade, growth would average 1.2 percent per capita a year, while it would average 5 percent per capita under market-based policies. The difference in poverty between the two scenarios is stark. With poor policies, the number of poor (those with per capita incomes below \$1 a day) increases slightly, from 473 million to 476 million, though their share in the population falls from 51 percent to 37 percent. With the faster growth resulting from market-based policies, the number of poor falls from 473 million to 174 million, or from 51 percent of the population to 14 percent. (This decline is roughly in line with what occurred in Indonesia over the last 25 years.)

Batchelder and Holt’s scenarios overstate the difference in India. Its policies have moved a substantial distance over the past five years toward free markets for goods and finance, and recent economic growth rates have reflected those better policies. Nevertheless, the basic point is shown by experience. Countries with better policies have substantially faster rates of poverty reduction. This model, of course, does not separate improvements in capital markets from other policy changes. Improvements in capital markets alone would be expected to provide some fraction of the impetus to growth found by Batchelder and Holt.

⁷Alan Batchelder and Tyler Holt. 1997. *2020 Visions: Creating Tigers, Cutting Poverty, and Increasing Trade, 1995–2020*. USAID Economists Working Paper No. 6. Washington.

This empirical link between market-oriented policies and growth is important in the present context because the link between USAID capital markets projects and poverty reduction is neither direct nor immediate. At present, the firms that raise capital because of improvements in the structure of the capital market will not make major increases in employment as a result. Nor will the Indian stock market provide a means for the great bulk of small and medium enterprises in India to gain capital for expansion. Improvement in the structure of the equity market will directly affect perhaps several thousand firms, not the millions of smaller enterprises that constitute the mass of business enterprises. (Large firms do dominate output: in India, the 3,000 largest firms account for half of all manufacturing value added.) Small firms will, as elsewhere, need to rely primarily on internally generated savings, funds from family and associates, and borrowing from banks for their capital needs. Despite these limitations, work in capital markets appears to be a critical element in the rapid reduction in poverty in India in the longer term. The reasons for this lie in past Indian policies.

The role of capital markets in Indian development cannot be understood without a theory. The prevailing view among economists is that India is much poorer than it should be in view of its resources. India's savings rate has always been high, and has grown over the past several decades. The basic education system is weak, but its coverage has increased over time, and literacy has been increasing. Its higher education system is good, and the country has a substantial number of engineers and technicians. (Unfortunately, Indian expertise is more highly rewarded abroad than at home, and the country has had a continuing "brain drain" of skilled people. Major newspapers in India include large numbers of advertisements for foreign jobs.) Thus, the basic challenge in India is efficiency—to permit more to be produced with available resources.

Since independence, the Indian government has given central importance to investment and to capital. With the institution of economic planning in India shortly after independence, the government took control of allocation of investment in both the public and private sectors. The five-year plans set targets for each, by sector of the economy. The basic idea was that capital was the key constraint in the Indian economy. To move from its present poverty to its rightful place as an industrial country, it was essential that all capital be allocated carefully to avoid waste. Allowing the private sector to invest whatever it wanted and in whatever form it wanted was thought likely to lead to waste of investment capital. Without central planning, firms in some industries would be likely to build too much capacity, while firms in others would build too little. The excess capacity by the overinvesting firms would slow growth because capital would have been usefully employed elsewhere. The shortages in output from the latter firms would create bottlenecks in the economy. This would prevent firms in other sectors from achieving maximum output, thus also slowing overall growth. The key in this view was to have "balanced growth," with government setting clear parameters so that firms in all industries knew how much capacity to add. Since the entire economy would move forward in lock step, booms or depressions—or excess capacity and shortages—would all be avoided.

Further, the government believed that economies of scale were essential in heavy industry. Private sector operation was likely to lead to competition among firms that were less than optimum size. For maximum efficiency for heavy industry, there should be only one firm—able to achieve these economies and produce at minimum cost. Here again, capital is used most efficiently and waste is avoided. Since a private monopoly in such an industry would gouge consumers, such "commanding heights" of the economy should be government owned.

In other sectors, private activity would be allowed, but the tendency for business firms to build excess capacity and to engage in destructive competition would be limited by government controls on new investment. Firms would not be allowed to expand their factories unless they could show that the investment was needed to meet demand.

In sum, the Indian planning model was centered on concern about using capital efficiently. In 1950, the theory had considerable plausibility. The West had recovered from a lengthy depression only through the onset of world war, and the Soviet Union appeared to have made a great leap forward into industrialization through central planning.

This theory had two central assumptions that proved fallacious in practice. First, it was assumed that efficient production resulted more or less automatically from modern, technocratic management of industrial concerns. Getting the maximum production from a set of machines was a straightforward *engineering* problem. The key problem for economic growth was to ensure that all factories had the proper amount of capital so that the entire productive structure could move forward together. Second, the types of goods to be produced were conceived of in simplistic terms—tons of steel, numbers of automobiles, pairs of shoes—implicitly assuming that each industry produced homogeneous products for which the needs of the economy could be measured quantitatively.

The experience since 1950 demonstrates that modern economies are not like that. For the needs of steel-using industry, the problem is not simply the number of tons of steel produced but the number of tons of steel of particular specifications available in a particular place at a particular time. Planning processes are powerless to deal effectively with the qualitative, locational, and temporal dimensions. Only the flexibility of a market system, where the producer is rewarded for meeting these constraints

by the prospect of profit, and punished for failing to do so by the prospect of loss (and bankruptcy), has proven capable of this. The problem of specifications is compounded with consumer goods. If all consumers preferred size 9 brown penny loafers, the problem of predicting and meeting consumer demand for shoes would be relatively straightforward. But consumer preferences vary widely and change over time.

The second factor, closely related to the first, is technological advancement. Improvement in technology in both manufacturing processes in the world and in design of consumer goods has been rapid. Consequently, the idea of a knowable and fixed capacity for production for each factory disappears. To remain efficient, managers in each factory have to continually revise their production methods, adding machinery and techniques in line with evolving technology. They need to change the product in line with changing designs and new materials. In sum, they must continually make new decisions about what to produce and how to produce it. Once the immensity of these problems becomes clear, it becomes evident that central planning is simply not capable of meeting the needs of a modern economy.

To cite a specific example, India began producing automobiles under the planning approach, importing the technology and equipment necessary to build a model close to the 1954 Morris Minor. For three decades, production continued of essentially the same vehicle with minimal design and production changes. By the 1980s, India was probably producing 1954 Morris Minors rather efficiently. However, relatively frozen technology made possible by India's isolation from the world economy and the absence of domestic competition meant that the Indian automobile was technologically obsolescent. No one with access to the alternatives available in the world marketplace would want one. Other countries had found ways to produce better automobiles at lower cost. As

with the Soviet bloc when those markets were opened (where it was difficult to find any firm that was producing goods salable on world markets, even at very low prices), it has become clear that the forces of competition are critical to the efficiency of industry in the long run.

What Joseph Schumpeter called “creative destruction” is at the core of modern market economies. Firms and entire industries that do not maintain competitiveness in the long run by adapting new technologies are simply pushed aside. Firms go bankrupt, or are acquired by others, in order to reorganize people and capital equipment into arrangements that can produce efficiently what is wanted by society.

Looking around India, it is clear that much capital is wasted or misallocated. Because of the uncertainty of electric power, business firms have their own generators. Dozens of ships wait in the port of Mumbai for their turn to unload or load. Bungalows for offices and residences of government officials, relics of a quieter day, sit in the shadow of Mumbai skyscrapers on some of the most valuable land in India. More broadly, the amount of economic growth that has occurred in India has not been commensurate with the amount of capital investment that has been taking place. To achieve faster economic growth, and faster reduction in poverty, capital needs to be used more efficiently.

This greater efficiency of capital use is the key to converting Mumbai into an Amsterdam or a Singapore. To achieve faster economic growth, the capital market must provide continuous revaluation of the worth of the economy’s capital assets through the prices they command in the marketplace. This continuous revaluation makes three important contributions to growth. First, it signals to other providers of capital (such as banks) the prospects, and therefore the riskiness, of lending to companies. Second, it

provides incentives for new firms to enter promising sectors, and for investors to seek out and invest in companies of the future. Third, it provides the means, through takeovers of existing companies by more efficient firms, in order to redeploy the capital more efficiently. In the longer term, restructuring the capital base and the means by which capital can be drawn to the most efficient use provides the most promising way for productivity of labor to be increased. Increasing labor productivity is the only sure means for steadily increasing wage rates and incomes—of allowing those hard-working but unproductive laborers visible everywhere in Mumbai to acquire the incomes and amenities of their counterparts in Singapore or Amsterdam.

CONCLUSIONS

1. USAID’s capital markets development projects have been very successful. The three projects reviewed each had an identifiable link to significant improvements in the operation of India’s capital markets. Each offered concrete experimentation with promising activities, and each pushed the policy environment in a favorable direction. Each led to establishment of new or stronger institutions that have grown and evolved to solve real development problems. USAID/India was able to work constructively with appropriate host-country institutions and provide timely and effective support.

- The PACT project helped launch the venture capital industry and demonstrated the value of close collaboration between Indian and U.S. companies at a time when policymakers were skeptical.
- The HDFC project provided Housing Guaranty money for housing finance. It helped launch this industry, which has since provided billions of dollars of long-term finance for private housing.

- FIRE/regulatory has increased the transparency of the securities markets and improved oversight by the Securities and Exchange Board, making India more attractive for foreign and domestic investment.
- FIRE/debt is helping finance local infrastructure activities and may well catalyze new approaches to the financing of municipal infrastructure in India.

2. Capital markets are critical to India's development. India needs to grow at 8 or 9 percent a year in order to eliminate pervasive poverty within a generation. It cannot do this without better capital markets. Improving capital markets in India would have two important effects.

First, it would increase the quality of investment in the economy. India's economic growth problem in the past half-century has been due more to the *quality* of national investment than to its quantity. Indian savings rates are sufficiently high to support faster economic growth. Better capital markets are particularly important to moving savings into more efficient investments.

Second, efficient and transparent capital markets can attract increased foreign savings to India (billions of dollars a year) to finance additional investment in public infrastructure. Increased infrastructure investment is essential for both faster economic growth and poverty reduction. The faster development of India's infrastructure requires both progress on the

policy environment and innovative approaches to financing long-term investment.

3. In India, capital markets development is important to poverty alleviation in the long term. India would have substantially less poverty today if its government had given more attention to capital markets efficiency and less to directly intervening in the economy, often in the name of poverty alleviation. USAID usually prefers activities where the links to poverty are tangible. In India's case, there is simply too much to be done for microlevel activities to make any dent in the problem. Permitting markets to allocate investment is one of the prerequisites to large-scale poverty reduction.

4. In capital markets, USAID/India has been able to achieve substantial impact and visibility with small projects in a large country. This may be due to the fact that capital markets activity is concentrated geographically and operates with a relatively small number of participants.

5. USAID's generalist staff has been able to manage an activity requiring highly specialized expertise, including excellent technical contractors. The development of a modern capital market requires specialized knowledge about issues such as clearance and settlement systems, depositories, and the desirability of financial instruments such as derivatives. USAID staff typically have little knowledge or expertise on such issues. Nevertheless, the India experience suggests that this is no obstacle to proper contracting and oversight of such specialized expertise.

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