FEATURE ARTICLE

Can Brazil Continue To Outperfom India?

Although both Brazil and India are defined as "Big Emerging Markets" (or BEMs)¹, foreign investors tend to view their future in radically different light. The first is often seen as capitalist and energetic, the second as still semi-socialist and sluggish. The conventional wisdom is that long-term earnings should therefore trend up in Brazil, whereas in India their direction remains uncertain.

This belief is well reflected in recent market performance: since early 1991, Brazil's total return \$ index has appreciated by a whooping 543%, against India's disappointing 29%.

However, a closer examination of economic, political and social trends in the two countries leads to a rather different conclusion. In fact, the preconditions for a sustained profit takeoff are much more favorable — and the risk lower — in India than in Brazil.

Taking the longer view, the equity-market history of the two countries suggests that semi-socialist India has been far kinder to financial investors than capitalist Brazil (Chart II-1). Since December 1975, India's total return US\$ index has outperformed the S&P 500 by 63%, whereas the comparable Brazilian index *underperformed* it by 13%. Moreover, India's superior performance has been actually far less risky than Brazil's (the standardized deviation from the market's five-year moving average was almost twice as large in Brazil).

Short- and medium-term equity performance is affected disproportionately by liquidity and investor's "hype." Both the recent market weakness in India and equity rally in Brazil are largely due to these factors. Over the longer run, however, the major driving force is corporate earnings. And here, too, the historical record is clearly in India's favor (Chart II-2). Since March 1987, aggregate corporate earnings (measured in US\$ and approximated by the ratio of market capitalization to PE ratio) have expanded by 56% annually in India, whereas in Brazil they actually *fell* by an average 4.7% a year

DECEMBER 1996



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Note: Series are shown as a 12-month m

¹ The "Big Emerging Markets Initiative" was launched by the US International Trade Administration in 1993, as a means of focusing US business on the opportunities offered by the largest developing countries. The BEMs currently include Argentina, Brazil, Mexico, ASEAN, Greater China, India, South Korea, Poland, South Africa and Turkey.

(top panel of Chart II-2). Of course, this expansion is largely a reflection of the much faster capitalization process in India, but even if we account for differences in IPOs, India's earnings per share have done much better than Brazil's, where real EPS is 78% lower than it was ten years ago (bottom panel).

How could this make sense? Why should a dynamic pro-investor market such as Brazil's fail to produce positive long-term returns, whereas a country where socialist ideals were dominant until recently generate such investor-friendly results? The reason is partly due to misconceptions about the political differences between two societies. In fact, aside from banking nationalization, India has never dispensed with private property and its supporting institutions. In Brazil, on the other hand, free enterprise was subject to increasing interventionism since 1930s. And there is much more.

Brazil and India are both 'big' — accounting for 1.6% and 2.0% respectively of world GDP when measured in purchasing power terms. But the sources of 'bigness' are fundamentally different. Whereas the Brazilian promise is mainly in its seemingly unlimited (and largely undiscovered) natural riches, the prospects for India lay primarily in its huge population. As we shall see, this difference has had a significant impact on the historical course of the two societies and shall continue to underpin their development in the 21st century.

Sources of earning growth

Conceptually, corporate earning could be thought of as being a function of three principal factors: (1) potential GDP, which we shall denote as the *"supply factor"*, (2) the relative deviation of actual from potential GDP, or the *"cyclical factor*," and (3) the distributive share of earning in GDP, which we refer to as the *"share factor*." ² By looking at the determinants affecting these factors we can formulate a rough idea about the future course of earnings. (The analysis naturally involves many complex interactions. For convenience, these interactions are summarized in the "Investment Conclusions" section.)

Historically, GDP growth has been significantly faster but much more unstable in Brazil than in India (Charts II-3a and II-3b). However, there is also a clear process of convergence. Indian growth rates

² For the mathematically inclined, earnings (E) are, by definition, equal to:

 $E = POTENTIAL GDP \times \frac{GDP}{POTENTIAL GDP} \times \frac{E}{GDP}$

started picking up after the country's 1947 independence from Britain, and continued accelerating. By the early 1980s, they surpassed Brazil's for the first time since the late nineteenth century.



1860 1880 1900 1920 1940 1960 1980 2000





Population

By definition, GDP is the product of population and GDP per capita, and the India-Brazil convergence has been due to both. Historically population growth in Brazil was affected positively by immigration, whereas in India it was influenced negatively by famine (Chart II-4). The recent reversal of these trends, compounded by sharp falls in the Brazilian birth rate and the Indian death rate carries two principal implications.

First, it is clear that over the next decade or so, population growth in both countries will continue to contribute $1\frac{1}{2}-2$ percentage points annually to GDP growth — i.e, to the "supply factor" of corporate earnings.

Second, Brazil is unlikely to experience a "population explosion" — in fact, the UN projection is that by 200& its annual population growth will drop down to the world's average of 1.4%. During this period, India's population growth is set to drop to 1.6%. However, because its per capita resource base and land mass is already far smaller than Brazil's, its expected expansion from 935 mn people presently to 1,392 mn in 2025 presents a far more serious socio-economic risk. This risk could bear negatively on the "cyclical factor" and "share factor" of Indian earnings.

GDP per capita

Of course, rapid population growth need not end in social calamity — provided that productivity growth is even faster. Historically, per capita growth has been faster, but far more volatile in Brazil than in India (Chart II-5). Here, too, however, there is a clear case



of convergence, and since the mid-1980s India's per capita growth has surpassed that of Brazil's.

In our view, this reversal of fortune is not a temporary aberration, but rather a sign of things to come.

At the risk of some oversimplification, we can say that the differential performance of the two economies was rooted in two principle factors: (1) their relative "openness" to trade and investment, and (2) the extent to which they have jettisoned their feudal past (see "Openness, Politics and Per Capita Growth" on page 15).

Now, although both economies are going through market reforms, Brazil will likely remain more open to foreign trade and investment. Also, because of the persistent strength of large land owners in Brazil, income inequality there will remain far greater than in India. In light of their respective histories, these factors alone suggest that the "cyclical factor" for corporate earnings will continue to be much more volatile in Brazil than in India.

Because Brazil is currently emerging from a longterm crisis, such volatility is not necessarily bad for investors. Indeed, the prospects for a significant demand "catch up" after the long downturn is one reason for the present positive sentiment toward Brazil.

However, the very volatility of the "cyclical factor," as well as other considerations to which we now turn, suggest that the "supply factor" for Brazilian earnings is unlikely to revert back to its historical average, and will probably lag that of India.



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Investment

Conceptually, per capita growth is affected by two principal variables: the growth in capital per worker and the level of technology, or "total factor productivity." Regarding the former, India has made much bigger strides that Brazil. As illustrated in Chart II-6, Indian investment as a share of GDP has been rising more or less continuously since the 1960s, whereas the Brazilian ratio has moved sideways and is currently close to its record low of the mid-1980s. The underlying reason is clear from Chart II-7. In Brazil, the saving rate has changed little over the past four decades. (The sharp rise in this rate in the late 1980s was a consequence of the



Note: series are shown as a 3-year moving avg. Source: World Bank.



Openness, Politics and Per Capita Growth

Until the 1930s, Brazil maintained a free-trade regime. Its economy was driven by primary commodity exports, particularly coffee, which made it highly sensitive to global changes in demand and liquidity. The Great Depression of the 1930s devastated the Brazilian export sector. This, together with the growing influence of fascist ideology triggered a fundamental change in direction. The country embarked on a rapid industrialization process, based on import substitution and an authoritarian political regime. Notably, there was no significant land reform and the economy remained open to foreign investment. A "tripod pact" was put in place, with the nascent domestic industry concentrating on consumer non-durable goods, foreign investors dominating the durable-goods sector, and the government supporting both with massive investment in natural-resource development, infrastructure and heavy industry. The result was four decades of rapid and largely uninterrupted per capita growth.

Yet, because of severe income inequality, the mass consumer market remained underdeveloped, while heavy reliance on capital inflow kept Brazil vulnerable to changing global liquidity. When the debt crisis hit in the early 1980s, the economy plunged into yet another long-term downturn, from which it is only now beginning to recover.

In contrast to Brazil, India has been a relatively closed economy. The consequence was far less volatility but until recently also stunted growth. During the nineteenth and early twentieth century, the British imperial administration attempted to raise productivity and standards of living. However, it also forced India to run a trade surplus as a way of paying for these "administrative services." Historians still debate the net benefit of this arrangement, though it is clear that the capital drain limited investment, causing India to more or less miss the industrial revolution. Indian manufacturing, which in 1800 accounted for an estimated 20% of the world's total, dropped to about 2% of that total in the 1930s.

Economic development started in earnest only after independence. The colonial legacy meant that foreign investment was not welcome and external trade remained restricted. Despite highly unfavorable opening conditions, government investment and land reform nonetheless succeeded in raising productivity, creating a mass market for consumer goods and removing the specter of famine. Since the early 1980s, greater liberalization has for the first time moved India beyond subsistence, laying the foundations for its industrial takeoff. debt crisis which forced Brazil to sharply reduce its current account deficit. The subsequent decline in the 1990s came as the debt crisis subsided). India's saving rate, on the other hand, has risen by about 50% since the early 1960s.

Saving rates tend to be inversely correlated with the demographic "dependency ratio."³ As illustrated in Chart II-8, the relationship for emerging markets is very tight and the reason is simple: a high dependency ratio means that a greater proportion of income has to be devoted to private consumption and public services, so less can be saved.

The present age structure of Brazil and India is similar: 32.2% of the Brazilian population is below 15, compared with 34.9% in India, while 5.2% are above 65 in Brazil against 4.9% in India. As their young people mature, both countries should see their dependency ratio decline, giving them an equal chance to significantly raise their saving rates.

This is in theory. In practice, the potential for a higher savings rate may not fully materialize. A quarter of a century ago, both Brazil and India

³ The "dependency ratio" is given by dividing the number of economically inactive people (younger than 15 or older than 65) by the number of economically active (15-65 years of age). For more on the significance of demographic trends for savings, see "The Demographics of Investing in Emerging Markets," in the December 1995 issue of *Emerging Markets Analyst*.



Source: World Bank.



W. Baer, The Brazilian Economy (1995).

began with the same dependency ratio of 0.79; since then, their ratios have declined more or less in tandem, but whereas India's saving rate has improved significantly, Brazil has remained unchanged.

The future course of investment will also be affected by its distribution between the private and public sector. As illustrated in Chart II-9, public investment in Brazil has trended down since the 1970s, whereas in India the process is just beginning (The chart shows the GDP share of government investment, but not of state-owned enterprise. If the latter were included, the Brazilian decline would have been far sharper.)

Although the effect of such structural transition on the overall investment/GDP ratio is difficult to forecast, certain observations seem warranted. In the case of Brazil, private investment often had to be *lured* by trade barriers and underwritten by large public investment into infrastructure and resource development. In India, on the other hand, the role of private capital has been *deliberately limited* by the now-defunct "license raj," a system which regulated investment, output and employment — sometimes in minute detail.

For this reason, liberalization is likely to have different consequences in the two countries. In Brazil, declining public investment has already had the effect of reintroducing some of the risks it earlier helped absorb, which partly explains the ensuing collapse of private investment.⁴ In India, on the other

⁴ Since 1975, public investment as a share of GDP fell from 4% to 3%, whereas total investment fell from 27% to 18%.

Table II-1 Total Factor Productivity (Ann. % Chg.)

	1960-1980	1980-1988
South-East Asia*	1.9	.1.6
South Asia	0.6	1.3
of which India:	0.3	2.3
Africa	0.3	-0.5
Latin America	0.4	-1.4
OECD	. 1.2	0.6

* High-performance economies only. SOURCE: *India: Economic Reform and Growth*, IMF Occasional Paper 134, December 1995.

hand, the declining share of public investment since the mid-1980s was accompanied by progressive deregulation; the consequence was that the slack in public investment was more than compensated by soaring private investment. This qualitative difference between the two countries is not likely to change in the near future, which suggests that India's investment growth will continue to outpace Brazil's.

Another ramification derives from the fact that, by its nature, public investment tends to be less volatile than private investment. This means that as long as India's public sector remains relatively larger than Brazil's (and this is expected to be the case for the foreseeable future), its investment will continue to be more stable than Brazil's.

The implications for corporate earnings are twofold. Because investment spending affects both production and demand, *faster growth in capital per worker will augment the "supply factor" as well as "cyclical factor" in India faster than in Brazil.* Moreover, lower volatility means that *these impacts will remain more predictable and less risky in India than in Brazil.*

Total factor productivity

The most important but least understood aspect of growth is "technology." The ingredients of technology are largely qualitative and hence difficult to measure and analyze. Economists therefore label its impact on growth opaquely as "total factor productivity," or more humbly, "a measure of our ignorance."

Most broadly, total factor productivity can be thought of as the *efficiency of social organization*. This reflects numerous socio-economic characteristics, the nature of political structures and, most importantly, the way in which all of these factors interact with one another.

Table II-1 indicates that, after lagging the pack for a long period, India's total factor productivity growth has recently emerged as *one of the fastest in the developing world*, including the "Asian tigers."

Three fundamental considerations suggest that this superior showing is neither a mismeasurement nor a

Chart II-10

Human Development Indicators



historical accident. As we argue below, the state of human development, income distribution and urbanization all seem to favor India over Brazil. Corporate earnings in India will therefore benefit disproportionately both through the "supply effect" of faster total factor productivity growth, as well as through the "cyclical effect" of a more stable internal market and a lesser political risk.

1. Human development

A crude way of assessing "social efficiency" is by using some of the human-development indicators published by the United Nations (Chart II-10). The data suggest that human development, at least on average, is generally much more advanced in Brazil than India, which is perfectly consistent with Brazil's higher per capita income. But as far as future growth is concerned, this is a double-edged sword.

Bražil is still far from Western human-development standards, but India's lag is even greater. Because India is starting from a much lower base, the implication is that the *rate of growth* of its human development could be faster. Whether this potential will indeed materialize is partly a political question, and as we explain below, the political obstacles for such development are smaller in India than in Brazil.

2. Income distribution

The effect on per capita growth of income distribution is a contested issue. During the early growth stage of a country, growing income inequality can serve as a catalyst for investment and a source for greater savings. The downside is that this limits mass purchasing power, heightens cyclical instability, and intensifies political strife.⁵ On balance, the net effect on per capita growth seems to be *negative*, as illustrated in Chart II-11.

This carries major implications for Brazil and India. In terms of distribution, the two countries stand at extreme poles: the former has one of the most unequal distributions in the developing world, the latter one of the most equal. Moreover, the difference has been systematically widening (Chart II-12). These diverging trends are rooted in the distinct social and natural conditions of the two countries, and should therefore continue to have a major bearing on their respective economic performance (see "Politics of Income Distribution" beside).

The Politics of Income Distribution

In terms of distribution, Brazil's "primordial sin" dates back to the sixteenth-century, when the Portuguese crown parceled its New-World colony into a small number of "captaincies" under the effective sovereignty of only 12 landlords. Although inequality in land ownership is no longer that extreme, it nonetheless remains very high. Presently, about 70% of its total rural area is owned by only 5% of the population, roughly the same proportion as in 1960.1 One reason for the stalemate is that throughout Brazil's history, settlement in the vast Amazon forest offered a convenient safety valve for social tension. In this sense, the riches of the Amazon proved to be a mixed blessing, since they enabled Brazil to keep postponing the moment of reckoning. Unlike in many Asian countries, the legacy of feudalism in Brazil has been tackled only gradually and should therefore continue to haunt it well into the future.

Most fundamentally, the absence of significant land reform implies a continuous rift among the Brazilian elites. The principal conflict runs between the landowning elites of the north-east and the industrial elites of the south. The process of industrialization ushered a major internal migration into the growing industrial region, causing the rural elites to loose much of their population base. This relative loss of power forced them to accept the 1988 democratic constitution. But their concession did not come cheaply. In return the constitution stipulated that the federal government had to transfer to the states and municipalities roughly one half of its revenues, often without a parallel spending responsibility.

One implication is that current attempts to reform the constitution in order to eliminate its inherent fiscal drag are in for a rough ride. Another is that the government's commitment to sound fiscal and monetary policies will continue to come up against the demands of powerful interest groups.² Finally, the process of human development, a prerequisite for industrial capitalism, will remain hamstrung by opposition from the rural elites.

In contrast to Brazil, India had little virgin territory for new settlement, so the issue of income distribution had to be tackled head on. After Independence, the government implemented wide-scale land reform. Although this was only partly successful and fell far short of the more radical reforms in some of the Asian countries, it nevertheless helped lessen income inequality. Most significantly, it weakened the previous power of the "Zamindars" (large landowners). The result is that, in contrast to Brazil, India's feudal legacy is no longer a fetter on capitalist development.

- ¹ Data from B.K. Becker and C.A.G. Egler, *Brazil: A New Regional Power in the World Economy* (1992), p. 136.
- ² In 1995-6, the federal government moved to bail-out several faltering state banks, a black hole which could eventually suck in \$40 bn, or 6% of GDP.

⁵ For a recent discussion on the relationship between distribution and growth, see the World Bank's newsletter *Transition* (September-October, 1996).



Chart II-12 Income Ratio of Top 20% to Bottom 20%



Both countries are now moving from a statist to a liberal regime. However, the tendency of per capita growth to spread much more equally in India than in Brazil is perhaps one reason why democracy has been pretty much secured in the former, whereas it is a recent arrival in the latter. A telling illustration of the attendant risks is the extent of crime: although poverty is equally intense in the two countries, Brazil suffers from one of the worst *and rising* urban crime rates in the world, whereas India enjoys one of the lowest.

3. Urbanization

Growing urbanization has two principal effects on total factor productivity. The measurable impact



* % increase in the ratio of urban to total population. Source: World Bank; *World Resources, 1996-97.*

comes from the fact that productivity is generally higher in industry than in agriculture. This means that the very process of urbanization causes *overall* total factor productivity to rise, even when its separate levels in industry and agriculture remain unaltered. The unobservable impact derives from the effect of urbanization on social interaction. Unlike the former, this impact could be positive as well as negative.

Chart II-13 plots the relationship between average per capita growth and the relative rise in urbanization in 15 developing countries. Because of the impact of other factors, the relationship is not tight, though it is clearly positive.

Over the past decade, urbanization rose by roughly 30% in both Brazil and India, but this is where the similarity ends. In Brazil, 70% of the population already lives in cities, which means that its urbanization process has run much of its course. By contrast, only 30% of the Indian population is urbanized, so the process there is only beginning. As a consequence of this difference, Brazil is currently deriving as much as 90% of its GDP from industry and services, while in India the comparable share is only 70% (Chart II-14). Taken together, these numbers mean that the ratio between labor productivity in industry and in agriculture is 5.4 in India, against 3.9 in Brazil.

The implication is twofold. First, even if urbanization in the two countries were to proceed at an equal pace, the effect on per capita growth is bound to be much higher in India than in Brazil, simply because





Note: series are shown as a 5-year moving avg. Source: World Bank.

the productivity disparity between industry and agriculture there is far larger. Second, because Indian urbanization is only beginning, over the next generation its *pace* will likely be much faster than Brazil's. The combined impact on per capita growth should therefore be much greater in India.

Because urbanization means that fewer people have to produce a greater amount of food, the process is intimately related to the speed of agricultural productivity growth. Until recently, this growth has been far faster in Brazil than in India (Chart II-15). Since the late 1980s, however, their relative performance has changed, with Indian agricultural



Source: World Bank.

productivity accelerating and Brazilian productivity actually falling for the first time since the 1960s.⁶ Because agriculture productivity *levels* in India are still far lower, the implication is that its *rate of growth* — and hence its pace of urbanization — will continue to accelerate.

The "share factor"

Although overall economic growth determines the size of the pie, profits are also affected, sometimes drastically, by their relative share in the pie. Income share data in emerging markets leave much to be desired, but available statistics could nevertheless provide a basis for some general conclusions.

Chart II-16 shows that the labor share in manufacturing is far higher in India than in Brazil. This carries two related implications. First, it means that *the profit gains from redistribution are potentially larger in India than in Brazil.*⁷ This greater potential in India is amplified manyfold by the far smaller size and lower capital/output ratio of its manufacturing sector. Because new manufacturing

⁶ The extent of improvement in India is attested by the massive accumulation of grain stocks and by the fact that up to 1/3rd of the vegetable and fruit produce goes unsold and is lost due to lack of storage. The Indian authorities are now considering for the first time the possibility of significant food exports.

⁷ If the non-labor shares of the two countries were to converge to around 70% from their current levels, this alone would represent a 13% real *gain* for Indian earnings against a 10% real *loss* for Brazilian earnings.



Source: World Bank.



Source: World Bank.

capacity in India will continue to be introduced at a faster rate than in Brazil, the potential for a rising non-labor share is very large and will not be quickly exhausted.

Note that in principle, such redistribution *need not* take the form of declining real wages. Indeed, the share of labor in India has been trending down since the 1960s, but as Chart II-17 shows, both labor and non-labor income were rising — only that the latter was rising *faster*. The experience of Brazil was fundamentally different (Chart II-18). Since the late 1970s, the economic crisis meant that non-labor income could be raised only by *lowering* labor income. Given that the share of the latter was a tug-of-war and a political crisis. In the end, the overall

Table II-2 Real GDP Growth in the Next Decade* (Ann. % Chg.)

	BRAZIL		INDIA	
	Supply	Cyclical	Supply	Cyclical
Population growth	+ 1.5		+ 2.0	
Population size				± 0.5
Openness		± 2.0		± 1.0
Investment	+ 0.5	± 0.5	+ 1.5	
Total factor productivity	+ 1.0	± 2.5	+ 2.0	± 1.0
TOTAL	+ 3.0	± 5.0	+ 5.5	± 2.5

* Emerging Markets Analystestimates.

distributional outcome remained largely unaltered. The second implication therefore is that the *political risk of redistribution is also lower in India.*

Of course, a rising share of non-labor income could be partly diverted to government through higher tax rates. Presently, Brazil's average tax rates, both direct and indirect, are roughly twice those of India, which means that the share of government has more room to grow in the latter than in the former. The consequence is that the superior "share factor" in Indian corporate earnings could be partly offset by a faster growing government intake.

Investment Conclusions

Table II-2 summarizes our finding by projecting the components of long-term economic growth in the two countries (all estimates are in real terms). The rows list the principal variables affecting GDP growth, whereas the columns classify the avenues trough which these variables operate. For each country, the first column provides estimates for potential GDP growth ("supply factor"); the second column includes estimates for the likely volatility of that growth ("cyclical factor"). Because it is much more difficult to estimate, no quantitative projections are given for the "share factor" of earnings.

• Overall, we expect Brazil's real GDP growth over the next decade to average 3%, with a cyclical volatility of $\pm 5\%$. The average projection for India is 5.5% with a cyclical volatility of $\pm 2\%$. The prospects for Indian earnings could be substantially augmented by a rising profit share. • In the long term, India is therefore a better investment from an earnings perspective. Medium term investors, however, could end up doing better in Brazil because of its larger earnings volatility

• Population growth will likely have a similar contribution to corporate earnings in the two markets, although the absolute population size presents a larger socio-political risk in India.

• Brazil is likely to remain more open to external trade and investment than India, which will make its earnings more volatile.

• Because of its higher saving and institutional structure, capital formation in India will continue to be faster and more stable than in Brazil. Indian productivity will therefore benefit disproportionately.

• Taken together, human development, income distribution and urbanization are more conducive to growth in India than in Brazil. Indian politics is likely to remain democratic. The risk of a return to authoritarianism in Brazil is reduced, but not eliminated.

• The GDP share of corporate profits is far lower in India than in Brazil. The implication is that Indian profits could benefit disproportionately by a redistribution from labor to non-labor income, although rising taxation is likely to moderate this gain.