



SENSEX is likely to touch 50,000 by December 2015

Background

On January 8, 2008, Bombay stock market's key index, SENSEX (i.e., Sensitive Index, which is composed of 30 companies), touched an all-time high of 20,873 and almost all analysts expected it to touch 25,000 before the end of 2008. Indeed, the market sentiment was overly buoyant and an uninterrupted rise of the Indian stock market seemed inevitable to market analysts, stockbrokers, businessmen, politicians, as well as the ordinary man. None of these analysts suspected that SENSEX would drop precipitously or that the Indian Rupee (INR), which had also appreciated to 39 INR to 1 USD, may "drop like a rock" with respect to the US Dollar (USD) and other currencies.

Evalueserve took a contrary view by publishing an article on January 08, 2008, titled "*The Indian Stock Market – Continued Boom or Impending Bust?*" This article outlined a very high likelihood of the following scenario unfolding: "Because of a sudden crisis of confidence, there would be a flight of Foreign Institutional Investor (FII) money out of the country. According to Evalueserve's models and analysis, if USD12 billion of FII money were to leave within a quarter, the stock market would drop by approximately 30% and the Indian Rupee would depreciate by about 6%. This would imply a level of 14,000 for SENSEX, which was the level of SENSEX around a year ago (i.e., January 2007) and was already causing anxieties among market participants, regulators, and the Indian government. Fortunately, an immediate 6% depreciation of the Indian currency would not be catastrophic for the economy, although it would lead to a bout of inflation and a short-term negative impact to the current account deficit."

By July 08, 2008, Evalueserve's predictions had come true. The "irrational exuberance" that existed in January 2008 with respect to the Indian stock markets, the appreciation of the Indian Rupee, and the Indian economy in general had disappeared. The SENSEX was already hovering around the 14,000 mark. Further, INR had depreciated by 10% to 43 INR to 1 USD. During 2004 and 2007, India enjoyed a substantial inflow of FII money (USD 49 billion) most of which found its way into the Indian stock market, but in a reversal of fortune, an outflow of USD 9.2 billion of FII money had already taken place during January and June 2008.

Of course, then came The Great Recession¹ worldwide that lasted until the third quarter of 2009, resulting in the SENSEX dropping to 8,451 on November 20, 2008, before it recovered to 17,464 on December 31, 2009. Similarly, the Indian Rupee depreciated from 39 INR to 1 USD in January 2008 to 53 INR on March 15, 2009, but then recovered substantially and was trading around 46 INR on February 28, 2010.

Another USD 9.9 billion of FII money had left India by March 2009 when SENSEX had reached its nadir. Since the lowest point for SENSEX in March 2009, again there has been a substantial in-flow of approximately USD18.1 billion (during April and October 2009) of FII money to India, and most of this has again gone into the Indian stock market. This leads to the following question, Will this new infusion of FII money be the primary cause of SENSEX going up from 8,160 on March 9, 2009 to 17,000 on March 3, 2010 or is the current boom in the Indian stock markets justified by underlying fundamental strength of the Indian economy? We attempt to answer this question in this article.

We believe that the Indian stock market which was grossly overvalued two years ago, is now more reasonably priced simply as a result of India's continued economic growth. If we assume that a country's market capitalization as a proportion of global market capitalization mirrors its share of World GDP, India's stock market seems to be within 15-20 % of where it should be. According to a recent analysis by The Bespoke Investment Group, India's market cap was 2.7 % of World market cap while India accounted for 2.2% of World GDP in 2009. After conducting extensive research, our analysis shows that SENSEX and other Indian stock indices seem to be trading within 10% of where they should be (at least from a theoretical

¹ A term coined by Peter Morici an Economist and Professor at the R.H. Smith School of Business at the University of Maryland, College Park, Maryland, U.S.A.

perspective), and if the Indian economy continues to grow at an average of 8.5% per year until December 2015, if there is no double-dip recession in developed countries, if the Indian Rupee continues to trade around 46 INR to one US Dollar, then SENSEX should be comfortably placed at 15,622 on March 31, 2010, and around 50,130 in December 2015. Similarly, BSE-100 should be comfortably placed at 8,378 on March 31, 2010, and 30,247 in December 2015. Also, other Indian market indices (e.g., BSE-500) seemed to be placed within the 10-15% “theoretical range” and are likely to grow at an average annual rate of 20-22% per year for the next 5-6 years. Finally, although the Indian stock markets will continue to be fairly volatile for the next few years, an investor who takes a long-term – a five to six year – view is likely to be rewarded very well, especially after taking dividends into account.

Given below are some highlights of our analysis as well as the assumptions and caveats made therein.

The Indian Economy and the Stock Market – The Next Six Years

The future of Indian stock market is heavily dependent upon the following three parameters, which we will discuss in the subsections given below: (1) future growth of the Indian economy, annual inflation, and productivity related improvements; (2) the in-flow and out-flow of Foreign Institutional Investment; and (3) any movements of price-earnings ratios.

Future Growth of Indian Economy

India's economy grew at an annual rate of 9.4% during the three years, 2005-08, with agriculture averaging around 5% per year. India also survived The Great Recession of 2008-09 due to minimal exposure of financial sector to sub-prime lending and domestic demand driven growth. According to our estimates, its economy's average annual growth rate during the two years, 2008-10, is likely to be around 7% (in real terms), with the current fiscal year outperforming the last one by over 1%.

Favorable demographics, high savings rate, rising middle class, and underleveraged households suggest that domestic demand, and the economy, will continue to grow strongly. Taking a long-term view and assuming an exchange rate of 46 INR to 1 USD, an annual growth rate of 7% in 2009-10 and 8.5% during 2010-16, the market sentiment being overly buoyant, an inflation of 6% per year, the size of the Indian economy in nominal terms is likely to be USD 1,250 billion in 2009-10, USD 2,400 billion in 2014-15, and USD 4,640 billion in 2019-20. This implies a cumulative nominal annual growth of 14% and an approximate four-fold increase in the coming decade.

During 2009-10, the services sector would account for approximately 56% of the Indian economy; the manufacturing and industries sector would contribute about 29%; and agriculture about 15%. Between 2005 and 2008 both the services and the industries sectors grew at approximately 14-15% on a nominal basis and 9-11% in real terms. We expect these sectors to grow between 15-16% in the next six years, wherein the growth would be particularly driven by three groups of industry verticals, which together dictate the Indian stock markets, briefly mentioned below.

The first group consists of services that are mainly geared towards the Indian domestic markets and include retail, travel and hospitality (e.g., airlines, hotels, theme parks), financial services, healthcare (including medical tourism, alternative medicinal centers and spas, hospitals, pharmacies, and laboratories), entertainment (including the Indian movie and TV industries), and private education. Many sub-sectors within this group are likely to grow at 25-30% per year, and overall, this group is expected to grow at an annual rate of 21-22% per year.

The second group likely to exhibit rapid growth consists of hi-tech services and products, some of which are currently being exported. These hi-tech services and products include information technology (IT) and application development, business process outsourcing (BPO), knowledge process outsourcing (KPO), drug

research and clinical research outsourcing (CRO), engineering services outsourcing (ESO), software and solutions related to the consumer Internet, software as a service (SAAS), open source, software-cum-services, and telecommunications (both wireless and wire-line) products and services. This group is expected to grow at an annual rate of 17-18% annually.

Finally, the third group consists of products and services related to high-end manufacturing and infrastructure. It includes automobiles, automotive components, electrical and electronic components, specialty chemicals, pharmaceuticals, gems and jewelry, textiles, and sectors related to construction, real estate, and infrastructure. This group is also expected to grow at an annual rate of 17-18% per year.

There would be considerable fluctuations in the growth rates over the years and within the sub-components of each group, but each group would continue to claim an important place in dictating the SENSEX level. Since productivity in Public Sector Undertakings (i.e., PSUs or companies where the federal and state governments own more than 50% equity) and family owned businesses has improved at a very fast pace, these two sectors have become particularly important for the investing community. For example, Evalueserve's analysis shows that on an average, the productivity improvement for the 500 companies listed in BSE-500 was approximately 8% per year during 1991-2005, and it was more than 10% per year for most family-owned businesses. These improvements were mainly driven by penetration of IT in all sectors and management and organizational innovations.

For PSUs that are listed in the Indian stock markets, productivity improvements were significantly higher. For example, during April 1991 (i.e., when the Indian economy started liberalizing) and March 2005, the average net profit per employee for the PSUs that are a part of BSE-PSU index went up from USD 1,000 per employee to USD 11,500 per employee and the average revenue per employee went up 8 times during the period. Although these figures are quite impressive, according to our estimates, an additional 80% in productivity improvements would occur during 2005-15 on an average for a typical firm listed in the Indian stock markets. Clearly, such an improvement of 6% a year by itself would not increase the valuations of these firms since the productivity of other good competitors would proportionately also increase. Nevertheless, such a productivity increase would help these firms compete more effectively in a global market place.

There are also some fundamental issues that must be addressed for continuing the Indian economic growth story. One area of concern is the lack of infrastructure, and more so, the lack of investment in it. Currently, 56% of India's GDP is generated in the services sector, but lack of reliable power, transportation, and the logistics related infrastructure will begin to hamper its GDP growth rate, unless it is improved substantially and quickly. During FY 1991-2005, the Indian government spent approximately 3.8% of GDP on improving infrastructure. This spending went up to around 4.5% per year for FY 2006-08 and is expected to be about 5% per year for FY 2009-10. Although the investment on infrastructure is improving, it is still substantially short of the 8%-9% of its GDP that China was spending after 18-19 years of liberalizing its economy. Fortunately, the Indian government has realized this bottleneck and is planning to spend 9% of India's GDP in infrastructure during the five-year period, 2010-15. Indeed, if the government keeps its promise, then this investment would approximately equal USD 990 billion (assuming 46 INR = 1 USD) during this five-year period, which of course, would go a long way in improving India's infrastructure.

Another related subject is that of shortage of skilled labor both in the services and the manufacturing sector, which directly relates to the education-related infrastructure. So far, government has forcibly restricted the entry of private players by creating legal and administrative constraints. The issue of liberalization of restrictions and transparency in financial support for educational institutional is now entering the Indian discourse and is being debated in policy circles (both within the government and outside) that, as a first step, bodes well for the Indian economy.

Overall, the economic reforms have been good for the country and fear of reversal is not serious. The challenge is for the Indian Government to implement reforms in the labor-intensive manufacturing sector and in agriculture (which continues to employ more than half of the labor force). As China is beginning to exit the textile sector and would also soon move out of apparel sector because of rising wages, India would do well to capitalize on such opportunities.

Expected inflation during the next six years

The built up of inflationary pressure in the past one year has primarily been a result of rise in food prices. Food constitutes more than half of the consumer price basket in India, and any increase in food prices stokes inflation. The relentless increase in food prices underscores underinvestment in agricultural infrastructure, supply chain, food processing and related technology, and irrigation; all of these are imperative so that the supply increases more rapidly than the demand. Not only will such improvement reduce inflationary pressure, it will also increase rural income, which in turn, will reduce the pressure on various government-aided programs to rural areas. On the other hand, if these bottlenecks are not removed, the situation will become even more precarious since India, like many other fast growing economies, is running close to full capacity. Therefore any inflationary pressure is likely to translate into a wage-price spiral.

Although the current fiscal deficit is approximately 4%, this figure does not include several “off balance sheet” liabilities such as subsidies (e.g., oil, fertilizers, etc). The actual figure comes close to 9% of India’s GDP. The fiscal picture only gets worse as oil prices rise because the oil subsidies in various forms alone can add up to about 3% of its GDP.

Monetary policy, which often is the first line of defense against many internal and external shocks, in India is also an adjunct to fiscal policy. Under such circumstances, the Central Bank of India (called the Reserve Bank of India or RBI) would come under pressure to carry out monetary tightening to align the money growth with real economic growth. The RBI has already taken note of the issue at hand and has shifted its focus to inflation containment. However, RBI is constrained as the tightening would automatically begin to create a “credit crunch”, which would imply higher interest rates that would translate into higher cost of capital for firms, lowering their profit margins, investments, and earnings, and eventually slowing down the growth of the Indian economy.

We believe, removing some supply side constraints such as opening up the retail sector to FDI, reforming labor laws, allowing greater private participation in power generation and distribution, investment in agriculture sectors are a better remedy against high inflation. These measures are unlikely to be implemented quickly and would not have an immediate impact and our analysis shows that inflation is likely to remain at 6% or more per year for the next six years. Of course, double-digit inflation in India will send the entire economy into a tailspin because most people in India still live on approximately USD 3 per day and would simply not be able to buy food and other essential items, which in turn can destabilize the government and the on-going economic reforms.

P/E ratios in India during 1995 and 2005

As of December 31, 2009, there were 23 government-recognized stock exchanges in India and there were more than 9,700 companies listed on these exchanges. The Bombay Stock Exchange (BSE) lists about half of these companies (4,929). This exchange happens to be the oldest in Asia, having been established as “The Native Share & Stock Brokers Association” in 1875. As of December 31, 2009, the market capitalization of the companies listed on this exchange was approximately USD 1,400 billion (approximately 1.1 times India’s annual GDP). Since BSE has the most well-known indices within the Indian stock market, we focus on a few of these indices in this article: SENSEX (with a base of 100 in 1978-9), BSE-100, and BSE-500 (with a base of 1,000 in 1999 and comprising 500 listed companies in various Indian stock exchanges). Ignoring dividends, both SENSEX and BSE-100 have grown by 12.5% annually in USD terms between April 1, 1991, and March 31, 2005, although they have fluctuated fairly wildly during this period. In contrast, NYSE 100 and Dow Jones grew at annual rates of 9.6% and 9% respectively. Again, ignoring dividends, both SENSEX and BSE-100 have grown by 13.4% annually in Indian Rupee terms during April 1, 1991 and March 2005. On March 31, 2005, SENSEX was valued at 6,492.82 (with a price earnings ratio of 16.05) and BSE-100 was valued at 3,481.86 with a price/earnings ratio of 13.72. This growth rate can be partitioned into the following three components:

SENSEX is likely to touch 50,000 by December 2015

1. The companies comprising SENSEX and BSE-100 have individually grown at an average annual rate of 9% or more (in real terms) and 15% (in nominal terms).
2. As shown in Table 1 given below, the price-earnings ratio for companies listed in SENSEX went down from 19.68 in March 1991 to 16.05 in March 2005, i.e., an average drop of approximately 1.5% per year. Similarly, the price earnings ratio for companies listed in BSE-100 dropped by approximately 2.4% per year.
3. The difference between (1) and (2) approximates the average annual growth rate of SENSEX and BSE-100 (of 13.4%) as mentioned above.

Predictions Regarding the Indian Stock Markets during 2005 and 2015

To summarize the above discussion, the following three main components are likely to result in a strong upward movement of these markets:

- As discussed above, during April 2005 and March 2015, companies listed in SENSEX, BSE-100, and BSE-500 are expected to grow at an annual average rate of 11% (in real terms) and 17% (in nominal terms).
- In March 31, 2005, the firms in SENSEX were trading at an average price/earnings ratio of 16.05 whereas they were trading at an average price earnings ratio of 22.8 during 1991 and 2005. Our analysis shows that by December 2015, these firms (that are part of SENSEX, BSE-100, and BSE-500) are likely to trade at an average price/earnings ratio of 22.8 also, partly because of volatility and partly because the annual growth rates of these companies is quite high when compared to their counterparts in the United States and other developed countries. As a comparison, during the past fifteen years, an average firm in China's stock market has been trading at an average price-earnings ratio of 23. Clearly, on one hand, since the stock markets in the United States are much bigger and more mature, the companies listed there likely to command a higher premium; on the other, since these earnings are computed on the "last twelve month" basis and since the companies in India (and other emerging countries) are growing more rapidly – as much as 7-8% more – than their counterparts in the United States, we believe that the SENSEX, BSE-100, and BSE-500 will trade at an average price/earnings ratio of 22.8 (during 2005 and 2015).

Table 1: Price/Earnings Ratios for Bombay Stock Exchange (1991–2009)

Year	Sensex P/E	BSE-100 P/E	Sensex Closing Value	BSE-100 Closing Value	Number of Listed Companies
March 31, 91	19.68	19.11	1,167.97	589.48	NA
March 31, 93	29.32	27.08	2,280.52	1,021.40	NA
March 31, 95	30.30	34.66	3,260.96	1,605.57	NA
March 31, 97	14.57	13.84	3,360.89	1,463.69	NA
March 31, 99	14.59	13.88	3,739.96	1,651.37	5,860
March 31, 01	19.72	20.39	3,604.38	1,691.71	5,955
March 31, 03	13.74	11.76	3,048.72	1,500.72	5,650
March 31, 05	16.05	13.72	6,492.82	3,481.86	4,731
March 31, 07	19.84	17.22	13,072.10	6,587.21	4,821
March 31, 09	12.68	14.25	9,708.50	4,942.51	4,929

Since, on March 31, 2005, SENSEX was valued at 6,492.82 (with a price earnings ratio of 16.05) and BSE-100 was valued at 3,481.86 with a price/earnings ratio of 13.72, our analysis shows that from a theoretical perspective:

- On March 31, 2010, SENSEX should be valued at 15,622 assuming a P/E ratio of 18 and BSE-100 should be valued at 8,378 assuming a P/E ratio of 18 also. This is because the companies that constitute these indices grew by an average of 17.5% for three years and 15% during the remaining two years (during 2005-10).
- On December 31, 2010, SENSEX should be valued at 50,136 assuming a P/E ratio of 22.8 and BSE-100 should be valued at 30,247 assuming a P/E ratio of 22.8 also. This is because the companies that constitute these indices grew by an average of 18 for the next five years and nine months.

Similarly, other Indian market indices (e.g., BSE 100, BSE 200) seemed to be also placed within 10% of the “theoretical range” and are likely to grow at an average annual rate of 20-22% per year. Finally, although the Indian stock markets will continue to be fairly volatile for the next few years, an investor who takes a long-term – five to ten year – view is likely to be rewarded very well, especially after taking dividends into account.

Assumptions and Caveats in Our Analysis

Of course, the future rise and fall of the stock markets is almost impossible to predict especially because even seasoned investors trade as much using their emotions (and the “momentum” in the market) as the underlying fundamentals. In addition to not taking any emotional aspects into account or the scenario of a war with a neighboring country, a massive terrorist attack or some other calamity, our analysis does not take into account the following three scenarios (although the likelihood of at least one of them occurring is quite high):

Potential of a double-dip recession or stagflation during 2010-12 in some developed nations

During 2002 and 2007, consumers in the United States and other developed economies borrowed money by providing their houses as collateral and they were unable to return this money when the prices of these homes plummeted in 2007-08; eventually, this is what caused the Great Recession of 2008-2009. Whereas, consumers spending contributed only 66% to the U.S. economy in 2002-03, it contributed 71% in 2007-08, i.e., USD 700 billion more (which is 5% of the U.S. economy of \$14,000 billion). In 2009, the U.S. government provided a stimulus package of more than USD700 billion, which has been able to offset the corresponding loss in consumer spending at least for now and for perhaps for the next six months. It is unclear as to where the next USD700 billion will come from (once this money is exhausted).

Since the growth in some developed economies (e.g., U.S., U.K.) is likely to be quite anemic with unemployment hovering around 10%, if no additional stimulus money is provided by their governments, these countries could go into a recession starting July 2010 or later or these countries may face prolonged stagnation (which is quite similar to what has happened in Japan during the last fifteen years). On the other hand, if these governments decide to put additional stimulus money, the fiscal deficits may create massive problems (including a run-away inflation or stagflation) in the long run. Both recession and stagflation in these economies are likely to have a ripple effect in India with a substantial out-flow of FII money, an overall negative sentiment with respect to price/earnings ratios in the Indian stock markets, and an inability of Indian firms to export their goods and services to these developed economies.

FII money flooding the Indian stock market

The inflow of FII money during April-December 2009 is due to the following three reasons: FIIs consider India, China, and other emerging markets as regions of significant growth and where wealth would be created during the next decade; the interest rates that central banks are charging in many developed economies (e.g., the United States) is close to zero and therefore it is cheaper for FIIs to borrow money in their home-countries and then invest in emerging countries like India; and the stock markets in the U.S. and other developed countries may have already peaked at least for now. If these reasons continue to hold for the next six to twelve months and especially if the stock markets in developed economies continue to move sideways or downwards, this in-flow of FII money can flood the Indian stock market again, whose inability to absorb so much money will make it extremely volatile and eventually fall massively. The fundamental trouble with this “hot money” is that it can cause massive imbalances. For example, in the stock market, an indiscriminate buying by FII money can move prices away from fundamentals, which in turn, causes investors to feel more bullish and this sentiment can spill over to other sectors such as real estate. Interestingly, this is what brought about the Asian crisis in 1998 and there are already signs of overheating in India – on a per square foot basis several neighborhoods in Delhi and Mumbai are already far more expensive than Manhattan (in New York City)!

In spite of a substantial in-flow of FII money and remittances by Non-Resident Indians (NRIs) living abroad, India already has a current account deficit that is approximately USD24 billion per year. If the Indian Rupee appreciates significantly – for example, as it appreciated in 2007 to 39 INR to one USD – then this current account deficit will become much worse, especially because the import bill for crude oil will rise significantly. Furthermore, since the Chinese currency is pegged to the USD and artificially kept lower by 15% to 20% of its “real value,” India will be unable to compete with China with respect to exporting products and services. This, in turn, will substantially impede the growth of the Indian economy.

Persistent Fiscal and Current Account Deficit

Another risk that may eventually hold back India’s growth is the persistence of structurally high fiscal deficits. Fiscal stimulus, which was critical for sustaining economic growth given the global crisis, has further worsened the deficit picture. Increasing fiscal deficit led S&P to lower India’s long-term sovereign credit rating from stable to negative while retaining it at BBB- (the lowest rung of investment grade) in February 2009. Current account deficit, which stands at USD 12.5 billion in Q3/09 (it is almost 100% increase quarter-on-quarter) is also at a risk of increasing due to a rise in crude oil prices and non-oil imports, while the growth in exports is expected to remain weak due to a slack external demand and due to Indian Rupee appreciating with respect to the USD by almost 15%. A current account deficit even for long periods may not be necessarily bad in itself if it is used to build long-term productive assets. If everyone gets caught up in the market euphoria, there is always a risk that it could find its way into speculative investments such as real estate.

About the Author

Dr. Alok Aggarwal, the author of the article, is the Co-founder and Chairman of Evalueserve. Prior to starting Evalueserve, Dr. Aggarwal was the Director of Emerging Business Opportunities for IBM Research Division worldwide.

Evalueserve Contact

Email: marcom@evalueserve.com