

Developing Trends

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Whither Indian Stock Market?

Towards 6000 by March 2001

The Sensex closed yesterday at 4730. There is considerable talk of a worldwide bear market in stocks having begun, and how India can but not escape it. We disagree. Indeed, while not commenting on either the US or the world bear market (not that we don't think that it is going to happen, but rather because we have not studied the issue in detail), we conclude that the Indian stock market is more likely than not going to trend upwards; our target for March 2001 is between 5800 and 6200 on the Sensex, or a 27 percent gain from present levels. This special double issue of Developing Trends (DT) discusses why.

But first, some history, and some differences between India and the Dow, and now everybody's beacon?, NASDAQ. Over the last five and a half years, the Dow has rallied by 177 percent, the NASDAQ by 415. The Sensex has gained only 20 percent since end 1994! But maybe the choice of the beginning year is in error. Let us choose end 1997, some three years after the birth of the ICE (Information, Communication and Entertainment) age. The Dow is up 34 percent, NASDAQ up 147 and the Sensex up 29 percent.

It is likely that there is a reasonably strong short-term correlation between the US and European, Asian and Indian stock markets. Translate into the long-term (six months and beyond) and the correlation considerably weakens, and the *weakening* is the smallest for Europe and the highest for India. What the above data suggest is that there is almost a zero correlation (if not negative) between the movements of US and Indian stock markets.

But has India not opened up to the world, and has not the world become more global? Yes and yes. But stock markets often dance to their own domestic piper, and as the above numbers reveal, there is precious little medium or long-term correlation between India and the US. The US, indeed all worldwide markets, have been in a bull trend in the nineties. Excepting for a hiatus in 1998 in East Asia. There are two exceptions to the global bull. The bear in Japan and the stagnant still waters of India. The long road to nowhere ended in mid-1999 when the Sensex crossed 4800 for the first time. So the comparison of India with the US is between a bull and a hedgehog; between someone who rages on and someone who goes nowhere.

But that, at least according to Oxus, was a bad dream. It's over and the Indian Shiva Bull is likely to give most markets a run for their money. So what Indian fundamentals suggest a bucking of the emerging conventional wisdom defined global bear market? The last issue of DT entitled *Start of India's Decade* gave reasons why the Indian economy will excel, both absolutely and relatively, over the next 10 years. This DT is about a more difficult subject – but how much precedence is there for an economy which changes course, is a leading participant in a new (ICE) technology, and its markets remain in still waters? That is like expecting Ford prices not to accelerate once cars were introduced; or expecting Boeing not to take-off after World War II. Oxus would bet on history repeating itself, a worldwide, or US, bear market notwithstanding.

Developing Trends

The conventional wisdom today is that the Indian stock market is integrated into the world economy, and hence will be buffeted, and influenced, by the policies of the US Federal Reserve and the fortunes of NASDAQ. This wisdom is wrong on at least three counts. First, that Indian interest rates follow global trends. If only it were true. As we had documented in the earlier DT, real interest rates in India are the highest in the world, and this has been the case for the last three years. Interest rates in India are administered by not the Central Bank (though that would be bad) but by the Ministry of Finance! These mandarins have made it possible for savings deposit rates to yield about 7 to 9 percent in real terms. You can do the calculations as to what the real lending rate is. You can also forecast what this will do to equity prices (both issues discussed in this report). If you do both these relatively trivial calculations, you will realize that what Mr. Greenspan decides does not amount to “a hill of beans” for the Indian economy, or the stock market.

The second reason for skepticism about the simple “India is the same” model is that the exchange rate is managed, controlled. We are not passing any judgement as to whether this control has been effective, and whether it has proved “productive”. In recent years, the exchange rate *has* been well managed. But the fact that the warden is a kind-hearted gentleman is little comfort to the citizen whose economic freedom has been taken away. In the next issue of *Developing Trends*, we will examine what needs to be done with Indian foreign exchange management. As a teaser for the results, our conclusion is that there is very good reason for the Indian rupee to stay firm over the foreseeable future. Since it is a managed exchange rate, this forecast may be proven wrong. But the fundamentals are in favor of the rupee.

The third reason why the NASDAQ-Sensex correlation is very weak is because NASDAQ valuations are for firms including several dotcoms

that have yet to reach the promised land – in terms of positive earnings, at least. *There is not a single publicly listed dotcom in India, let alone among the representative 30 firms in the Sensex.* Further, the Indian ICE (Information, Communication and Entertainment) firms have been showing returns in excess of 50 percent for each of the last five years! Because of India’s strong comparative advantage in this sector, and the fact that government policy, including the all important interest rate policy, has relatively little impact, a safe forecast is that NASDAQ and Government of India (GoI) notwithstanding, ICE will continue to melt. And the inevitable meltdown has already happened as most ICE stocks are trading at about one-third their peaks in February-March 2000.

So hold on to ICE and buy non-ICE in India; where else will you see earnings growth of above 25 percent per year and a PE less than 20 ? Or a PE less than 10 for most non-ICE stocks. This is crazy, and it is unlikely to last very long.

So we at OXUS are sticking our neck out. We also realize that the market has rallied about 25 percent of its lows in just the last three weeks. But we are not making a short-term forecast. Corrections do happen – it is part of human nature. But we are making a forecast for March 2001 – the Sensex will be close to its all-time high of 6150. How do we reach this figure – read the rest of this special issue of *Developing Trends*.

The Table below shows both the actual, and Oxus’s fair value of the Sensex for the last six years. Also shown is the “gap”, the systematic underperformance of the Indian stock market. The introduction of ICE has increased the under-valuation; from being around 20 percent, the Indian market is now trading about 35 percent less than fair value. This value is 7745 for March 2001; under-performance of 20 to 25 percent gives a reasonable range of 5800-6200 for March 2001.

Year	Sensex		Under Valuation
	Actual	Oxus Fair Value	(%)
1995	3261	3693	-12
1996	3367	3956	-15
1997	3361	4315	-22
1998	3893	4945	-21
1999	3740	7058	-47
2000	5001	7703	-35
2001	6000?	7745	-20 to -25 ?

Source: Oxus Research Database

I. First, the Macro Fundamentals

- *India's economic growth has been robust with an average GDP growth rate of over 5.5% p.a. for the last 20 years. However, despite several policy reforms the Indian stock market has gone nowhere since March, 1992.*

The Indian economy has been among the top ten fastest growing economies in the world. The past record shows that it has consistently grown at an average of 5.7% a year, making it one of the best performing economies over the last two decades. The growth pattern has been steady. By breaking up the 21 year period into non-overlapping 3 year periods, the economy grew at 5.5% during 1980-82, 5.5% in 1983-85 and 6.4% in 1986-88. A similar trend continued in the 90s with the GDP growing at 6.4% in 1992-94, 5.6% in 1995-97 and an average of 6.6% for the last three years. In short, India's record of economic growth rate has been stable and robust. *(For details refer to Developing Trends, Vol.4, No. 1&2, Feb 24, 2000)*

The decade of 1990 saw initiation of major economic reforms following the Balance of Payment crisis in 1991, a chronological order of which is as given below *(See Table 2)*.

Table 2: Reform process in India

Period	Reforms Undertaken	Average Sensex Level for the year
1991	Initiation of economic reforms	1480
1992	Abolishment of - Comptroller of Capital Issues, License Raj and Monopolistic and Restrictive Trade Practices	2911
1993	A move towards unification of exchange rate, new regulations on Stock markets and formation of Securities and Exchange Board of India	2523
1994	FII's allowed to invest in Indian stock markets and the beginning of Private sector mutual funds	4069
1995	-	3363
1996	Introduction of NSE (competition among exchanges). Prior to this only Bombay Stock Exchange existed as the premier bourse in the country.	3390
1997	Revamping of direct tax rates with a reduction in maximum rate to 30%.	3801
1998	-	3334
1999	Rationalization of excise duties structure	4166
2000	Opening up of the Insurance sector to private players. Reform Process furthered in the area of FDI and custom duties. A systematic Attempt made towards a uniform excise rate.	5062
31st May, 2000	-	4434

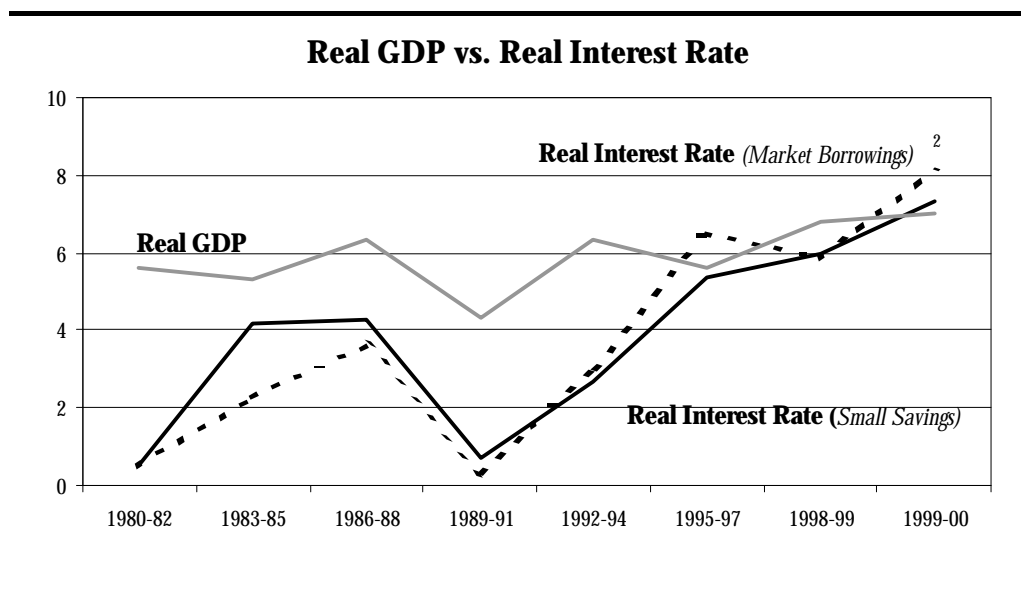
Source: Oxus Research Database

Notes: 1. Figure for 2000 is the average for the first three months.

- *It is noteworthy that this excellent growth record has been achieved in the presence of very high and rising real interest rates.*

As discussed extensively in an earlier issue of *Developing Trends*, interest rates (borrowing, saving, lending, you name it) in India are still one of the highest in the world and are currently in excess of 8%. (*Developing Trends, Vol.4, No. 1&2*). The structural change in the Indian Economy after 1991 has led to a decline in the core inflation. However, with the nominal interest rate remaining fixed (as defined by interest rate on small savings), the real interest rates have increased (*See Chart 1*). The high level of interest rate can be deduced from the fact that fully hedged US dollars cost 10% whereas the Government of India (GoI) is borrowing at a risk-free rate of 11-11.5%. This is of serious concern, particularly to the Infrastructure sector, where cost of capital is an important determinant for the viability for the long gestation projects. Due to a very high real cost of capital, not much Investment has come in this sector as project delays due to red tape coupled with high interest rates increase the pay back period of the project thereby rendering them financially unviable (*See Chart 2*). This has resulted in a slowdown in the infrastructure sector – something that analysts have consistently, and justifiably, complained about.

Chart 1: Real Interest Rates in India



Source: Oxus Research Database, RBI and GoI Documents

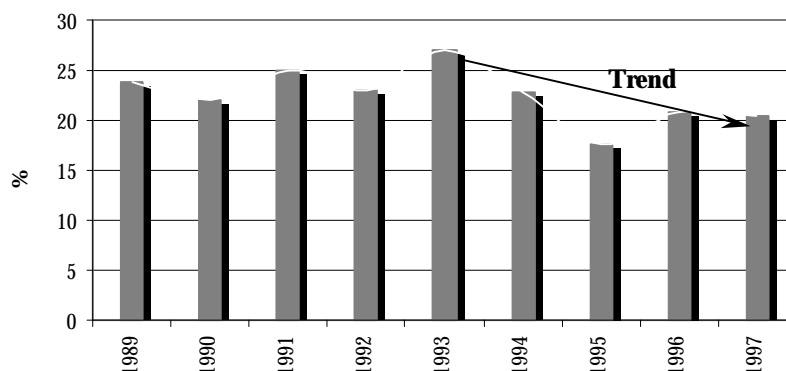
Notes: 1. Real Interest Rate in this case has been computed as nominal interest rate on small savings which was 12% till 1998 and 11.0% in 1999 minus the inflation rate as calculated by GDP Deflator.

2. Real Interest Rate in this case has computed as weighted average interest rate on GoI Dated Securities minus the inflation rate as calculated by GDP Deflator.

This high interest rate regime has also increased the vulnerability of the financial sector. Textbook economics would suggest that the increase in real interest rate increases the default probability of the borrower thereby increasing the likelihood of having higher non-performing assets in the banking sector. Table 3 shows that a high real interest rates in India have coincided with very high NPA to total asset ratio for the past 5 years.

Chart 2: Infrastructure Investment in India

Domestic Investment in Infrastructure as % of Gross Domestic Investment



Source: India Infrastructure Report, 1996 and Oxus Research Database

Table 3: Interest Rates and Financial Sector Performance

Year	NPAs of Public Sector Banks		Real Prime Rate (%)	Average Sensex Level
	Due to Non-Priority Sector Lending (In Rs Crores)	(% of the total NPAs)		
1995	17861	46.5	8.3	3363
1996	19067	48.2	8.5	3390
1997	21341	49.0	8.5	3801
1998	23107	50.6	6.5	3334
1999	27608	53.4	8.5	4166

Source: Oxus Research Database, RBI and GoI Documents

Notes: Real Prime Rates has been computed as prime minus the inflation rate as calculated by GDP Deflator.

II. Stock Market Record

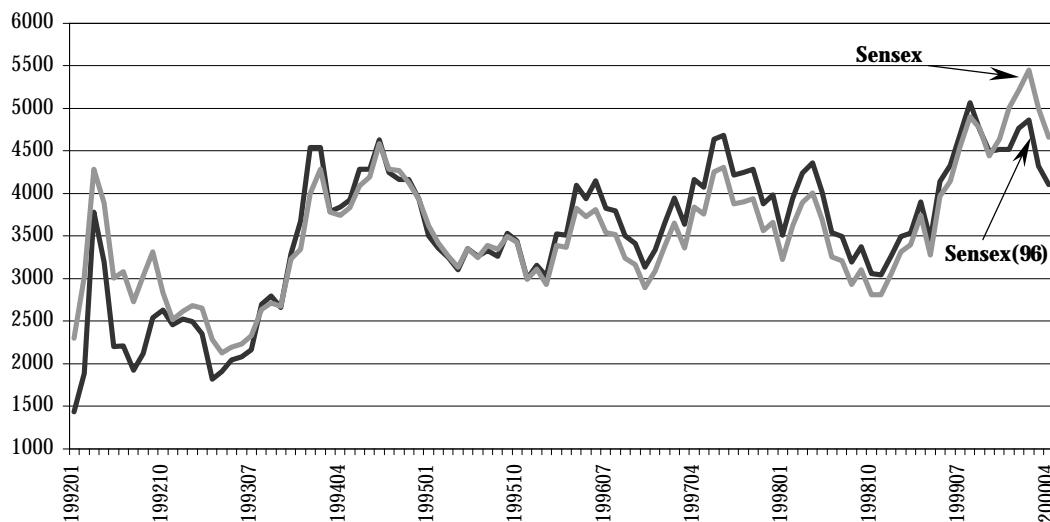
- The effect of economic reforms on the stock market has been nullified by these increasing and high, real interest rates. Hence, the Indian stock market has gone nowhere since March, 1992.

Given that growth has been accompanied by wide ranging reforms covering external, fiscal and financial sector, it would be logical to assume that the financial markets performance would have fully discounted the reform story in India by way of higher valuations. However, a cursory examination of average Sensex level for the 7 year period starting from 1994 to 2000 reveals that the Sensex has not gone anywhere (See Table 2 & Chart 3).

Analysis based on both Sensex and Sensex(96) (Sensex 96 refers to the composition of the index in 1996, a year just prior to the emergence of the ICE sector) reveals that despite several reforms the stock market has exhibited a sideways movement till 1998 (See Chart 3). Movement of Sensex (96), shows that the Non-ICE sector has moved in narrow trading range of 3000 to 4500 for the past seven years. Given a mean of about 3700, this is a very narrow range for eight long years! And the Sensex, like all

indices, is in *nominal* terms. Even the official Sensex index, which constitutes a changing basket at different points of time, exhibited a similar movement prior to 1999. However, post 1999 the Sensex performance can be referred to as a structural break with a breakout above 4500 and an intra month top at 6150 in February, 2000. The superior relative performance of Sensex vis-à-vis Sensex(96) post 1999 can be traced from the fact that the basket of the former included 4 ICE stocks which the latter did not have. What caused the Sensex to exhibit such a flat behavior till 1999 and the Non-ICE sector to continue exhibit a lacklustre performance is the focus of the analysis below.

Chart 3: Sensex performance, various indices



Source: Oxus Research Database, CMIE

Note: 1. Sensex (96) represents the index value of the basket of stocks in BSE-Sensex as in 1996.

2. Both the indices have indexed to the same level as on December, 1994.

3. Sensex (96) can be used as a good proxy for the Non-ICE sector and therefore would be used as such throughout this text.

- *Economic reforms would have meant an increase in profitability and earnings of the Indian corporate sector. With high real interest rates, the Non-ICE sector- which is highly interest rate sensitive- has had its gains in productivity (via economic reforms), and gains via increased competition and restructuring, have been nullified by bad economic policy on interest rates.*

The nonperformance of the Non-ICE sectors, is not surprising as this sector is *the* major sector affected by bad government policy e.g. controls, regulation, lack of bankruptcy laws, and yes, higher real interest rates. Although some regulations have been removed, the biggest impediment to profitability growth for the Non ICE sector, interest rate, still remains.

Table 4 gives the interest rate sensitivity for a sample of 42 Non-ICE companies under different interest rate scenarios of 13%, 12% and 11%. The sensitivity analysis shows that for every 1% decline in interest rates there is approximately 16% increase in EPS. The reverse is also true – every 1 percent increase means a decline in EPS i.e. if real interest rates had not increased by 300 basis points as they have, the economic reforms would have meant that the Sensex would be about 50 percent higher or 7000 today.

Table 4 : Interest Rate Sensitivity of the Non-ICE Sector

(All figs. In Rs. Crores)

NON ICE SECTOR	9903	9903*		
<i>Assumed nominal interest rate (%)</i>	14	13	12	11
Total Sales	227249	227249	227249	227249
PBDIT	62691	62691	62691	62691
Interest Exp.	40536	37640	34745	31849
Other	183	183	183	183
Depreciation	6853	6853	6853	6853
PBT	15119	18014	20910	23805
Taxes	3517	4190	4863	5537
Tax/PBT	0.23	0.23	0.23	0.23
PAT	11602	13824	16046	18268
Equity Capital	14060	14060	14060	14060
EPS	8.3	9.8	11.4	13.0
<i>Interest Exp./Sales (%)</i>	17.8	16.6	15.3	14.0
<i>Interest Exp./PAT</i>	3.5	2.7	2.2	1.7

Source: Oxus Research Database, CMIE

Notes: 1. The above analysis has been carried out for a sample set of 42 companies from the Non-ICE sector.

2. 9903A refers to actual figures for the sample set under consideration. and correspond to year ending March.

3. Figures for 9903* show interest rate sensitivity of the sector under different cost of capital scenarios with respect to FY'1999.

***PBDIT** refers to Profit before interest, depreciation and taxes.

***PBT** refers to Profit before tax

***PAT** refers to Profit after tax

Note the dichotomy – the profitability of the ICE sector is not dependent on the credit markets. What matters is human capital and that can easily be lent via ESOPs. Hence, the growth in this sector, or at least growth unaffected by government policy.

- *The dichotomy between the ICE and Non-ICE and therefore, Sensex and Sensex(96), can be studied through an index which gives adequate representation to **both** the sectors.*

Until just three months back, the Sensex was not representative of market capitalization, a market with almost one-third capitalization in ICE stocks. Lack of an appropriate stock market index made it easier for the fund managers to outperform by increasing the weight of the ICE sector in their portfolios. (As a rule of thumb, a good index is one where not more than 50% of the fund managers are able to beat the benchmark over an extended period of time.)

In 1999 more than 80% of the fund managers outperformed the Sensex. This under-representation of the ICE sector in the index made it difficult to analyze developments in the market. This led to the development of Oxus 40, an index comprising of 40 stocks (*See Table 5*). (For more on stock market indices please refer to *Where have all the profits gone?*, Economic Times, Feb. 1, 2000 and *Gone to markets, everyone*, Economic Times, Feb. 15, 2000).

Table 5: The Oxus 40

S.No.	Sector	Company	Weight in Oxus 40	S.No.	Sector	Company	Weight in Oxus 40
1	Automobiles	Mahindra & Mahindra	0.8	21	FMCG	Colgate-Palmolive	0.7
2	Automobiles	TELCO	0.9	22	FMCG	Nestle	1.1
3	Automobiles	Hero Honda	1.1	23	FMCG	ITC	5.3
4	Automobiles	Bajaj Auto	1.3	24	FMCG	Hindustan Lever	16.8
5	Banking	IDBI	0.7	25	ICE	Pentamedia Graphics	0.5
6	Banking	HDFC	1.7	26	ICE	Digital Equipments	0.6
7	Banking	ICICI	3.1	27	ICE	NIIT	2.3
8	Banking	State Bank of India	3.2	28	ICE	Satyam Computers	4.2
9	Capital Goods	Asea Brown Boveri	0.2	29	ICE	Zee Tele	6.0
10	Capital Goods	Siemens India	0.3	30	ICE	Infosys Technologies	13.8
11	Capital Goods	Punjab Tractor	0.4	31	Leisure	Indian Hotels	0.3
12	Capital Goods	BHEL	0.9	32	Miscellaneous	Tata Chemical	0.2
13	Construction	Gujarat Ambuja	0.9	33	Miscellaneous	Grasim Industries	0.7
14	Construction	TISCO	1.3	34	Miscellaneous	MTNL	3.4
15	Construction	Larsen & Toubro	1.4	35	Miscellaneous	VSNL	3.6
16	Energy	Castrol	1.1	36	Miscellaneous	Reliance Industries	9.5
17	Energy	BSES	1.2	37	Pharmaceuticals	Glaxo (India)	0.6
18	Energy	HPCL	1.4	38	Pharmaceuticals	Dr. Reddy's Laboratories	1.1
19	Energy	IOC	3.5	39	Pharmaceuticals	Cipla	1.4
20	FMCG	Tata Tea	0.5	40	Pharmaceuticals	Ranbaxy Laboratories	1.9

Source: Oxus Research Database, CMIE

Note: 1. Weights for various stocks are as of 31st May, 2000

2. FMCG refers to fast moving consumer good companies for e.g., Hindustan Lever & Nestle.

3. Miscellaneous category includes companies like Grasim, Reliance etc. which are diversified conglomerates and hence could not be classified into any other sector.

The Oxus 40 index comprises of 8 stocks from the ICE sector, with an aggregate weight of around 25-40%. The stock selection process for the index was based on sales & profitability criteria within the sectors and their liquidity in financial markets. This index is used later to help explain the performance of the two sectors and the corresponding valuations obtained by them in the financial market. Since the revamp of the Sensex (as on 10th April, 2000), with a 40-45% weight to ICE, the movements in Oxus40 and Sensex have been similar – one index: outperformance levels are the same i.e. an identical number of funds were able to beat the Sensex (2000) and Oxus-40. Therefore, either of these indices - Sensex (2000) or Oxus 40 - can now be used interchangeably to study the bipolar nature of the market.

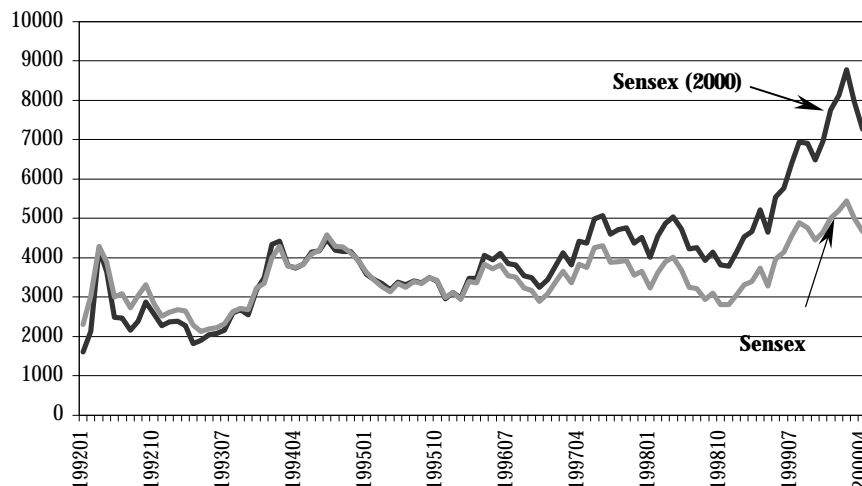
III. Technicals Point the Same Way

- *The ICE-Non ICE dichotomy based on technical indicators - price and volume, helps explain what the sharp rise in the new Sensex.*

The new Sensex (i.e. Sensex stocks of April 2000 projected backward) has shown a consistent rise since 1996, exhibiting a classical 5 wave bull phase from Dec, 1998 to Feb, 2000 (See Chart 4). This rise can be attributed primarily to the ICE sector stocks as their share in the total market capitalization increased from 7.3 per cent to 36 per cent over one and a half year period (See Table 6). Moreover, with the Sensex exhibiting a linear rise against an exponential rise in the Sensex (2000), it

can be concluded that the parabolic nature of the rise is due to ICE explosion - a paradigm shift in the Indian stock market.

Chart 4: Sensex performance, various indices



Note: 1. Sensex (2000) represents the revamped Sensex introduced on 10th April, 2000. The latest entrants include Dr. Reddy Laboratories, Reliance Petroleum, Satyam Computers and Zee Telefilms.
 2. Sensex(2000) has been extended backwards till Dec., 1992 to make the comparison consistent with other series.
 3. Both the indices have been indexed to the same level as on December, 1994

Table 6 : ICE sector Performance in the Sensex (2000)

(All figs. In Rs. '000 Crs.)

Year	Market Capitalization		% Share of ICE in Sensex (2000)
	Sensex(2000)	ICE Sector	
199512	112	1	1.0
199612	129	1	1.1
199712	178	4	2.4
199812	165	12	7.3
199912	362	116	32.0
200003	371	133	35.8
200005	316	88	27.9

Source: Oxus Research Database

Notes: 1. MTNL and VSNL have been excluded while computing the sectoral values for the ICE sector.

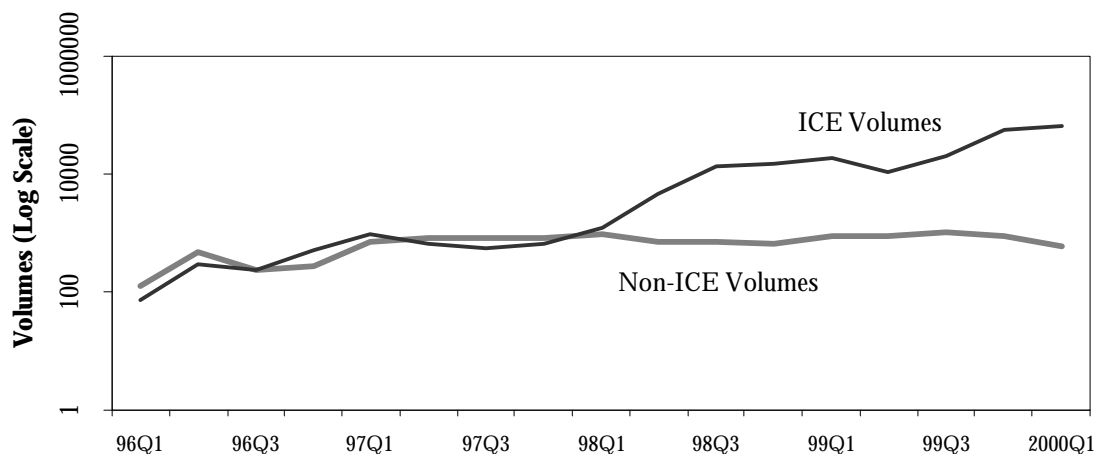
Although this issue of Developing Trends is about the fundamentals, it is equally important understand the market from the viewpoint of technicals. One important aspect of technicals is the study of volumes. Volumes becomes important because it not only monitors the demand–supply response of buyers and sellers, but also acts as a variable that is totally independent from price. Inserting volume into the analysis is one way to get some new evidence from a dimension that is not bound to price-manipulated statistics. The most important principle while studying volume is that it normally *accompanies the trend* and that it *precedes the price action*. A new high in price that is not confirmed by volume should be regarded as a red flag and a warning that the prevailing trend may reverse. Rising prices and falling volumes are abnormal and indicate a weak and suspect rally. Therefore, in a bull market, volume should be expanding so to confirm the price action. Similarly, in bear market, volume should be expanding so as to confirm the fall in prices.

Analysis of volumes, based on an index constructed by Oxus, throws up the following results. After showing a near similar movement till 1998Q1, the volumes of the two sectors started showing divergent trends from 1998Q2 (See Chart 5a). This divergence gained prominence after 1999Q1 thereby exhibiting increased investor activity and money flow in the ICE Sector vis-à-vis the Non ICE Sector. Even the share of ICE sector volumes to total volumes increased from 4.0% in 1998Q1 to 78.0% in 2000Q1 (See Chart 5b). Three conclusions follow from the above study. First, the rally in ICE sector has **not** been a manipulated one as the corresponding volumes confirm the rise in prices. Second, 1998 can be seen a structural break point in the Indian financial market's history due to the rise of extreme kind of bi-polarization witnessed, both in terms of price and volumes, during this period. Third, whereas the structural break in volumes occurred 1998Q3, the same can be witnessed in 1999Q1 for price, thereby confirming the hypothesis that volumes lead the price action.

The bull run saw price-earning ratios of 50 and 100 becoming commonplace for ICE stocks, not only in India but globally. Several market participants and policy makers including such eminent policymakers like Alan Greenspan explained this behaviour as 'irrational exuberance'. Their argument was that the fundamentals of the ICE sector, though good, did not justify such high valuations. Did the fundamentals justify such premium valuations or was it just an asset bubble? Depends whether you are looking at the US, or Korea or India. The next section explores this important question in some detail.

Chart 5a : ICE – Non ICE Volumes Index

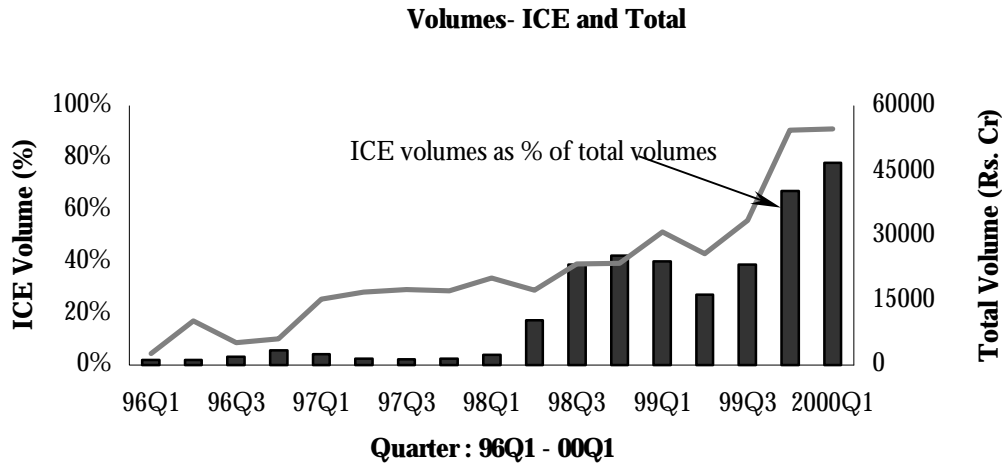
Volumes : ICE vs. Non-ICE



Source: Oxus Research Database

Note: Both Indices have been indexed to 100 as on 1st Qtr, 1996.

Chart 5b: Volumes – ICE and Total



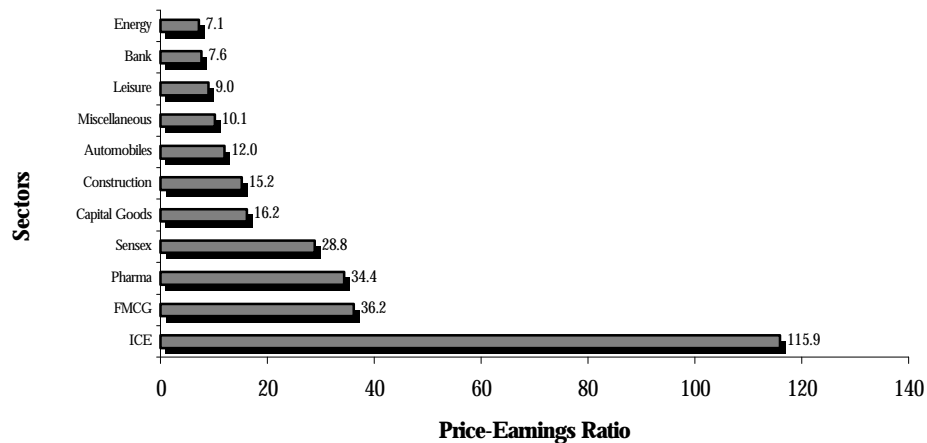
Source: Oxus Research Database, CMIE

IV. Back to Fundamentals

- *The polarization in the ‘technical’ indicators are very consistent with market fundamentals which also indicate that Non-ICE should be lacklustre relative to explosive ICE.*

Analysis of the financial performance of 10 top Indian software companies and 37 top Non-ICE stocks reveals that the ICE sector has outperformed Non-ICE by margins large enough to command a premium. A cursory examination reveals that only three sectors, namely ICE, Pharmaceuticals and Fast Moving Consumer Goods (FMCG) have outperformed the market (as represented by Sensex). However, what is surprising is the spread between the PE’s of these three sectors and the others, including the overall market. This only strengthens the view that the market believes that the growth prospect of the Non ICE sector is not very high due to the several impediments like excessive regulation, lack of privatization, and the high cost of capital.

Chart 6: Price Earning Ratios – A Sectoral View



Source: Oxus Research Database, CMIE

Notes: 1. PE’s for various sectors have been computed by way of an arithmetic average.
 2. The above PE’s for various sectors are as of 31st May, 2000.

Table 7: Fundamentals of ICE and Non ICE (1994-2000)

Year	1994	1995	1996	1997	1998	1999	2000	May, 2000
Market Capitalization (Rs. '000Cr.)								
ICE	0.7	0.9	1.0	1.8	5.7	20.8	92.9	68.2
Non-ICE	116.7	112.9	140.1	145.7	189.4	200.3	239.0	225.0
Total	117.4	113.8	141.1	147.4		221.1	331.9	293.2
EPS (Arithmetic Average)								
ICE	1.8	3.2	4.8	7	9.6	20.8	36.4	.
Non-ICE	12.2	16.4	18.5	19.8	20.2	21.7	23.7	.
Total	11.8	15.9	18.1	19.5	19.9	21.7	24	.
EPS (Weighted Average)								
ICE	2.7	3.8	6.3	9.3	11.8	22.2	37.8	.
Non-ICE	16.6	19.4	25.3	26.7	26	29.9	39.3	.
Total	16.6	19.3	25.1	26.5	25.6	29.2	38.9	.
EPS Growth (Arithmetic Average)								
ICE	.	72.6	52.8	44.6	36.8	117.6	75	.
Non-ICE	.	33.6	13	7.3	1.7	7.6	9.2	.
Total	.	34.8	14	7.6	2.2	8.9	10.7	.
EPS Growth (Weighted Average)								
ICE	.	44.5	63.7	47.8	27.1	87.9	70	.
Non-ICE	.	16.8	30.1	5.8	-2.6	14.9	31.3	.
Total	.	16.6	30.2	5.6	-3.4	14	33.1	.
Price-Earnings Ratio (Arithmetic Average)								
ICE	27	21.2	15.1	17.1	38.3	65.5	157.9	115.9
Non-ICE	32.7	18.5	15.2	14.2	16.1	15.5	15.9	15
Total	32.7	18.5	15.2	14.2	16.4	16.8	21.2	18.8
Price-Earnings Ratio (Weighted Average)								
ICE	32.3	26.7	18	21.5	46.8	62.7	222.4	137.8
Non-ICE	53.3	28.8	20.6	18.1	26.7	39.1	24.8	26.5
Total	53.2	28.8	20.6	18.1	27.3	41.3	80.1	52.4
Sensex								
<i>(End March figures)</i>	3779	3261	3367	3361	3893	3740	5001	4435

Source: Oxus Research Database, CMIE

- Notes:
1. The above figures for ICE & Non ICE have been computed for a sample set of companies which may be considered representative of the market.
 2. MTNL and VSNL have been excluded while computing the sectoral values for the ICE while SAIL has been excluded in the Non-ICE sector.
 3. All figures for market capitalization and price-earning ratios correspond to March end figs. for the respective years.
 4. Figures for 2000 have been extrapolated from the quarterly profits for FY'2000.
 5. Arithmetic averages have been computed assuming one company universe within that category i.e., ICE or Non-ICE.
 6. Weighted averages for ICE & Non ICE have been computed by weighting the respective market capitalization for various companies within each category.

Table 7 gives the ICE – Non ICE performance for 1994 to 2000. It can be observed that ICE has given a far superior performance in terms of earnings growth. ICE has grown at an average of approximately 60% for each of the last six years, whereas Non-ICE grew at an average rate of only 16% during the same period. ICE has traded at an average multiple of 53 times lagging earnings, while the non-ICE multiple has averaged 13 over the last six years.

The fair value PE of a firm is a function of the cost of capital and it's growth rate in earnings. This relationship between the growth and price-earnings multiple of a firm exhibits a linear relationship at the lower end of the growth spectrum and becomes highly non-linear as it moves above 35 – so PE's of 60 for a firm growing systematically at 40 percent a year is reasonable.

Valuation of Indian ICE is driven by global trends, international openness and human capital and is *not* influenced much by policies of the government. India presents the second largest emerging market exposure to ICE (after Taiwan). In terms of information technology (software) the Indian market is second only to the US. Over the last few years, Indian ICE has returned a stunning performance - the PEs have risen from 15.1 in Mar, 1996 to 157.9 in Mar., 2000 (*See Table 7*). Considerable value is there at present since most ICE stocks are now trading significantly below their trend growth rates. The next round of earnings reports – in July 2000 – will be critical to whether the Indian market follows NASDAQ for the medium short-term (six months) or charts its own destiny. We believe independence will be achieved.

Surjit S. Bhalla, Rohit Chawdhry and Nardeep Nanda.
Oxus Fund Management

Developing Trends

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The most recent four issues of **Developing Trends** had the following recommendations:

Developing Trends Vol.4, No.1&2, *Start of India's Decade*, February, 2000

- **On India's Economy:** Indian economy has been growing at a steady rate of 5.5% to 6.5% for the last 20 year - a fact ignored by most analysts. However, inspite of continuous reforms, there has been no acceleration in the growth rate. The solution to this problem lies in a changeover from an administered interest rate regime to interest rate targeting in India so as to achieve a sustainable GDP growth in excess of 8%.

Developing Trends Vol3., Nos.6&7, India Elections'99 – Voting with the Economy

Dated August 31, 1999

- On India's **politics:** A model was developed to explain the voting behaviour in the Indian economy. Economic factors alone can explain over 70 percent of the variation in Congress's share of the votes from 1977 to 1999. The model predicted 116 seats for the Congress party with a vote share of 27.2 per cent against 114 seats actually obtained by them when the next lowest forecast put out was in the 140-150 range.

Developing Trends Vol3., Nos.4&5, In Defence of the IMF

Dated May 21, 1999

- On the **global economy :** "The Asian crisis has been much shallower than the other crisis considered....Asia is like the Mexico of 1994 in its V-shaped recovery...the world economy would grow at a robust 2.7% pace in 1999, rather than the below 2% growth forecast by the critics."

Developing Trends Vol3., Nos.2&3, Italian Wine – Indian Spirit

Dated April 7, 1999

- DT was the very first to predict the boom in prices of Indian software companies when it stated , as early as may 1997, that "...considerations of catch-up and differential productivity levels dictate that service industries – e.g., advertising, software, banking, will do relatively well in India." (*DT, Vol. 1, Issue 3, May 26, 1997*)...Later, in Aug. 1999, we caught the next leg in the boom by stating "with real interest rates at unjustified levels and a reduction in nominal long-term rates imminent – the banking sector is finally set to take off. Oxus remains overweight in the software and banking sectors. (*April 7,1999*)..." "Interest rates will come down, inflation will remain low (below 4 percent as measured by the WPI), the Sensex will continue to boom, perhaps reaching 6000 by March 2000..." (*Economic Times, This Time India Is Different -Aug. 17, 1999*)

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