

### 9TH ANNUAL WEALTH CREATION STUDY

BY RAAMDEO AGRAWAL

### TOP 10 WEALTH CREATORS (1999 - 2004)

THE FASTEST THE BIGGEST

|      |                          | ADJUSTED | APPRE-  |      |                        | WEALTH  | APPRE-  |
|------|--------------------------|----------|---------|------|------------------------|---------|---------|
| RANK | COMPANY                  | MKT. CAP | CIATION | RANK | COMPANY                | CREATED | CIATION |
|      |                          | CAGR (%) | (X)     |      |                        | (RS B)  | (X)     |
| 1    | Matrix Laboratories      | 137.4    | 75.5    | 1    | ONGC                   | 1,029.7 | 7.1     |
| 2    | Sterling Biotech         | 114.0    | 44.9    | 2    | Reliance Industries    | 516.0   | 4.1     |
| 3    | Amtek Auto               | 111.7    | 42.5    | 3    | Indian Oil Corporation | 466.2   | 5.1     |
| 4    | Lupin                    | 95.7     | 28.7    | 4    | Infosys Technologies   | 230.9   | 3.4     |
| 5    | Jammu and Kashmir Ban    | k 76.5   | 17.1    | 5    | State Bank of India    | 206.5   | 2.8     |
| 6    | Bharat Electronics       | 76.2     | 17.0    | 6    | ICICI Bank             | 165.2   | 10.8    |
| 7    | Jubilant Organosys       | 75.8     | 16.8    | 7    | HDFC                   | 132.4   | 5.7     |
| 8    | Jindal Iron & Steel Comp | any 66.8 | 12.9    | 8    | Tata Motors            | 129.3   | 2.9     |
| 9    | Asahi India Glass        | 66.7     | 12.9    | 9    | HPCL                   | 129.1   | 4.0     |
| 10   | Motherson Sumi Systems   | 63.1     | 11.6    | 10   | GAIL (India)           | 128.0   | 3.5     |

### **HIGHLIGHTS**

- We had not expected commodity companies to create much wealth, but they account for more than 60% of the total wealth created in the current study
- Commodity prices rise sharply when there is squeeze, but profits of commodity companies and their share prices rise exponentially
- Stock prices are determined by 'marginal opinion' and not by 'majority opinion'
- Purchase price discipline, that is, huge margin of safety at the time of purchase, is paramount because it covers a multitude of errors committed while investing



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### Objective, Concept & Methodology

### **Objective**

The foundation of Wealth Creation is in 'buying businesses at a price substantially lower than their intrinsic value'. The lower the market value is compared to the intrinsic value, the higher is the margin of safety. In this year's study, we continue our endeavor to cull out the characteristics of businesses, which create value for their shareholders.

As Phil Fisher says, "It seems logical that even before thinking of buying any common stock, the first step is to see how money has been most successfully made in the past." Our Wealth Creation studies are attempts to study the past as a guide to the future and gain insights into 'How to Value a Business'.

#### Concept

Wealth Creation is the process by which a company enhances the market value of the capital entrusted to it by its shareholders. It is a basic measure of success for any commercial venture. Wealth Creation is achieved by the rational actions of a company in a sustained manner.

#### Methodology

For the purpose of our study\*, we have identified the top-100 Wealth Creators for the period 1999-2004 in the Indian stock market. These companies have the distinction of having added at least Rs1b to their market capitalization over this period of five years, after adjusting for dilution. We have termed the group of Wealth Creators as the 'MOSt-Inquire 100'. The Wealth Creators have been listed in Appendix I and II on page 34 and 36, respectively. Ranks have been accorded on the basis of Speed of Wealth Creation, that is, the compounded growth in Wealth Created during the period under study.

On the cover page, we have presented the top-10 ranking companies in terms of Speed of Wealth Creation (called THE FASTEST) and the top-10 ranking companies in terms of Size of Wealth Creation (called THE BIGGEST).

This is the first Wealth Creation study where a commodity business has topped the list of biggest Wealth Creators. In fact, the top-3 biggest Wealth Creators are all in commodity businesses. Hence, we decided to dedicate the 9<sup>th</sup> Wealth Creation Study to the analysis of the Wealth Creation process in commodities. Our Theme Piece for 2005, Back to Basics — the Era of Commodities, starts from page 22.

<sup>\*</sup> Capitaline and Trends databases have been used for this study

**Wealth Creation** 

1999-2004

The 9<sup>TH</sup> Annual Study

# **Findings**

### Comparative Performance v/s BSE Sensex

The Wealth Creator Group outperformed the BSE-Sensex by 22%

The Index of Wealth Creators fell only in one year out of the last five years - this also happened to be the only year when it underperformed the Sensex

The Sensex created history by falling for three consecutive years:

2000-01 (-27.9%)

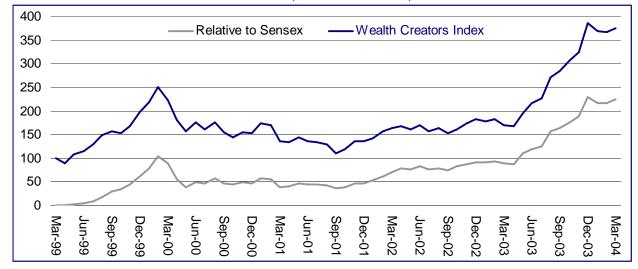
2001-02 (-3.7%)

2002-03 (-12.1%)

Its 83% rise in 2003-04 is a reflection of the chronic undervaluation that the market went through

The dominant prevailing sentiment in the minds of domestic investors now is the fear of the next downturn and not the greed of a continued upturn

#### WEALTH CREATORS' INDEX V/S BSE SENSEX (31.3.99 TO 31.3.04)



#### GROWTH: SENSEX V/S WEALTH CREATORS

|  | MAR-99 | MAR-00 | MAR-01 | MAR-02 | MAR-03 | MAR-04 |
|--|--------|--------|--------|--------|--------|--------|
| BSE Sensex                               | 3,740  | 5,001  | 3,604  | 3,469  | 3,049  | 5,591  |
| YoY Performance (%)                      | -      | 34.0   | -28.0  | -4.0   | -12.0  | 83.0   |
| Wealth Creators Index                    | 100    | 223    | 135    | 164    | 170    | 375    |
| YoY Performance (%)                      | -      | 123.0  | -40.0  | 22.0   | 4.0    | 121.0  |
| Sensex P/E                               | 27.0   | 29.0   | 16.0   | 13.0   | 11.0   | 15.0   |
| Wealth Creators P/E                      | 11.0   | 19.0   | 10.0   | 11.0   | 7.0    | 13.0   |
| 5-Year CAGR (%) Sensex                   |        |        |        |        |        | 8.0    |
| 5-Year Earnings CAGR (%) Sensex          |        |        |        |        |        | 22.0   |
| 5-Year CAGR (%) Wealth Creators          |        |        |        |        |        | 30.0   |
| 5-Year Earnings CAGR (%) Wealth Creators |        |        |        |        |        |        |
|  |        |        |        |        |        |        |

# Classification By Nature of Business

Oil & Gas and Banks have emerged as the dominant Wealth Creators

Eight businesses have created at least 5% of total Wealth Created, signifying broad basing of the stock market boom

IT companies, which contributed at least 30% of total Wealth Created in the last five studies, have seen their contribution fall to just 7%

Probably the time has come for Cement, FMCG, Textiles and Fertilizers to assert their presence in a much more conspicuous fashion

| WEALTH CREATORS: CLASSIFICATION BY INDUSTRY (RS B) |         |          |      |             |      |      |      |        |
|--|---------|----------|------|-------------|------|------|------|--------|
|  | NET     | SPEED    | NO.  | CONTR. TO   | ROCE | ROCE | CA   | GR (%) |
| INDUSTRY   | WEALTH  | CAGR (%) | OF   | WEALTH      | 1999 | 2004 | 19   | 99-04  |
|  | CREATED | 1999-04  | COS. | CREATED (%) | (%)  | (%)  | NP   | SALES  |
| Oil & Gas  | 1,995   | 41.4     | 9    | 34.0        | 16.6 | 27.7 | 22.7 | 18.1   |
| Banks  | 896     | 37.1     | 19   | 15.3        | 12.8 | 18.6 | 23.1 | 10.5   |
| Petrochem  | 548     | 40.2     | 3    | 9.3         | 11.0 | 14.7 | 25.7 | 34.9   |
| П  | 435     | 19.2     | 6    | 7.4         | 22.6 | 28.3 | 55.8 | 38.6   |
| Metals   | 382     | 34.2     | 8    | 6.5         | 5.5  | 23.9 | NA   | 12.2   |
| Auto   | 354     | 22.2     | 11   | 6.0         | 13.8 | 29.4 | 23.5 | 15.6   |
| Pharma   | 325     | 25.4     | 10   | 5.6         | 17.4 | 27.0 | 35.9 | 27.3   |
| Engineering  | 294     | 22.6     | 10   | 5.0         | 16.9 | 22.1 | 11.5 | 7.4    |
| Utility  | 235     | 45.3     | 3    | 4.0         | 13.5 | 14.1 | 15.0 | 17.8   |
| Cement   | 130     | 29.3     | 3    | 2.2         | 10.4 | 17.9 | 28.8 | 8.5    |
| Shipping   | 51      | 38.4     | 2    | 0.9         | 10.5 | 12.2 | 17.8 | 1.6    |
| FMCG   | 40      | 3.1      | 2    | 0.7         | 32.2 | 36.7 | 20.0 | 9.8    |
| Textiles   | 33      | 21.8     | 4    | 0.6         | 7.3  | 13.8 | NA   | 2.3    |
| Fertilizers  | 29      | 23.0     | 2    | 0.5         | 12.9 | 15.9 | 6.2  | 7.2    |
| Media  | 23      | 24.6     | 1    | 0.4         | 35.8 | 9.6  | 13.5 | 18.9   |
| Others   | 93      | 44.3     | 7    | 1.6         | 13.5 | 19.1 | 35.7 | 24.4   |
| Total  | 5,862   | 30.2     | 100  | 100.0       | 13.0 | 23.0 | 26.6 | 16.4   |

Classification By

Management: MNC v/s Indian

The markets believe that the sun seems to have set on the performance of MNCs

In the early 90s, MNCs used to contribute almost 40% of total Wealth Created

Perhaps Hindustan Lever's performance was overwhelming, then

MNCs have contributed just 2.3% of total Wealth Created in the current study

This signals either that one should pile on to these companies or that they have lost their relevance in the overall context

We believe that the former is more likely

#### WEALTH CREATORS: MNCs V/S INDIAN COMPANIES

|                       |      | NO. OF COMPANIES |                 | % WEALTH | H CREATED |
|-----------------------|------|------------------|-----------------|----------|-----------|
| WEALTH CREATION STUDY | MNCs | TOTAL            | MNCs % OF TOTAL | MNCs     | OTHERS    |
| 1999-04               | 8    | 100              | 8.0             | 2.3      | 97.7      |
| 1998-03               | 10   | 83               | 12.0            | 3.1      | 96.9      |
| 1997-02               | 16   | 85               | 18.8            | 22.8     | 77.2      |
| 1996-01               | 19   | 71               | 26.8            | 29.7     | 70.3      |
| 1995-00               | 21   | 100              | 21.0            | 14.8     | 85.2      |
| 1994-99               | 43   | 100              | 43.0            | 50.2     | 49.8      |
| 1993-98               | 50   | 100              | 50.0            | 47.3     | 52.7      |
| 1992-97               | 19   | 45               | 42.2            | 38.4     | 61.6      |
| 1991-96               | 38   | 100              | 38.0            | 35.7     | 64.3      |

Classification By

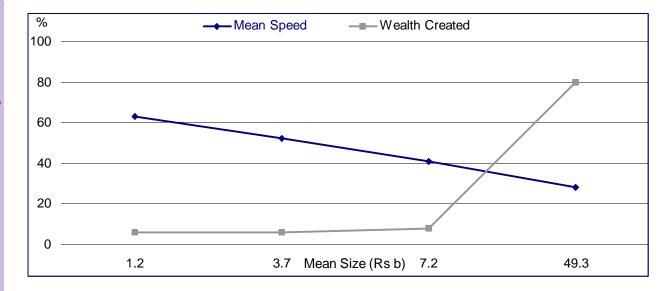
Market Cap: Speed v/s Size

Size of a company in terms of market capitalization has an inverse correlation with the speed of Wealth Creation

Institutional imperative is to back more steady larger companies, where speed is sacrificed for the size of Wealth Created

If you are looking for speedy Wealth Creation, you should pick companies with market cap of less than Rs10b

| WEALTH CREATORS: CLASSIFICATION BY MARKET CAPITALIZATION |           |             |                |                |     |  |
|--|-----------|-------------|----------------|----------------|-----|--|
| MARKET CAPITALIZATION                                    | MEAN SIZE | NO. OF COS. | MEAN SPEED (%) | WEALTH CREATED | (%) |  |
| >= 10  | 49.3      | 41          | 28             | 80             |     |  |
| 5 < 10   | 7.2       | 14          | 41             | 8              |     |  |
| 2.5 < 5  | 3.7       | 14          | 52             | 6              |     |  |
| < 2.5  | 1.2       | 31          | 63             | 6              |     |  |
| All Companies  | 22.1      | 100         | 30             | 100            |     |  |

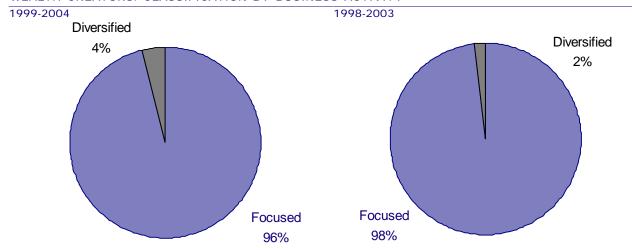


### Classification By **Business Activity**

The participation of diversified companies in Wealth Creation remains limited

We expect this to be the case in the future, as well





| WEALTH CREATION STUDY | FOCUSED (%) | DIVERSIFIED (%) |
|-----------------------|-------------|-----------------|
| 1999-04               | 96          | 4               |
| 1998-03               | 98          | 2               |
| 1997-02               | 96          | 4               |
| 1996-01               | 100         | 0               |
| 1995-00               | 95          | 5               |
| 1994-99               | 96          | 4               |
| 1993-98               | 93          | 7               |
| 1992-97               | 98          | 2               |

### Classification By **Product Attribute**

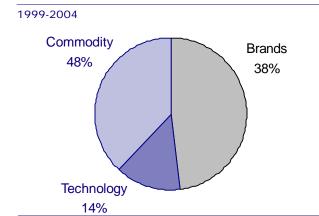
Technology has taken a backseat in terms of the number of companies participating in the Wealth Creation process

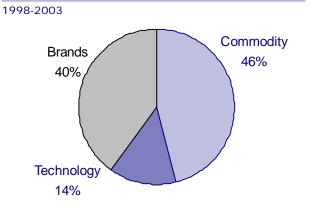
Brands/franchises have been able to maintain their share at around 40%

Dominance of commodities among the Wealth Creating companies has further strengthened in this study

The current low-single-digit P/E reflects the lack of faith in the continuity of the commodity upturn - will consensus be wrong again?

#### WEALTH CREATORS: CLASSIFICATION BY PRODUCT ATTRIBUTE





| WEALTH CREATION STUDY | BRANDS (%) | COMMODITY (%) | TECHNOLOGY (%) |
|-----------------------|------------|---------------|----------------|
| 1999-04               | 38         | 48            | 14             |
| 1998-03               | 40         | 46            | 14             |
| 1997-02               | 49         | 26            | 24             |
| 1996-01               | 57         | 22            | 21             |
| 1995-00               | 47         | 17            | 36             |
| 1994-99               | 27         | 14            | 59             |
| 1993-98               | 26         | 24            | 50             |
| 1992-97               | 43         | 4             | 53             |
| 1991-96               | 27         | 20            | 53             |

| 1999-04    | WEALTH CREATED (RS B) | WEALTH CREATED (%) |
|------------|-----------------------|--------------------|
| Brands     | 1,551                 | 26.5               |
| Commodity  | 3,717                 | 63.4               |
| Technology | 593                   | 10.1               |
| Total      | 5,862                 | 100.0              |

# Classification By Capital Allocation

Tata Motors stands out as the biggest value creator for every Rupee retained/deployed by the company

Its market capitalization has increased despite a reduction in capital employed

ONGC's increase in productivity of capital has been rewarded in 2003-04

IOC yet lags full appreciation of its improvement in productivity of capital

In the short run, the market is a voting machine, but in the long run, it is a weighing machine

This is proved by the fact that 66% of the Wealth Creators have actually increased their return on capital employed

We believe that this trend would be more accentuated going forward

| WEVLTH | CDEATODS: | CLASSIFICATION | BY CADIT | AL ALLOCATION |
|--------|-----------|----------------|----------|---------------|
| WEALIN | CREATURS. | CLASSIFICATION | DI CAPIL | AL ALLUCATION |

(RS B)

|                        |     | ROC  | E (%) | MARKE  | T CAP. |                   | $\triangle$ M.CAP/ |
|------------------------|-----|------|-------|--------|--------|-------------------|--------------------|
|                        | △CE | 1999 | 2004  | MAR-99 | MAR-04 | $\triangle$ M.CAP | △ CE               |
| Tata Motors            | -24 | 7    | 31    | 43     | 173    | 130               | -6                 |
| Infosys Technologies   | 27  | 28   | 45    | 97     | 329    | 232               | 9                  |
| ONGC                   | 196 | 14   | 26    | 169    | 1198   | 1030              | 5                  |
| HPCL                   | 30  | 22   | 32    | 43     | 172    | 129               | 4                  |
| GAIL (India)           | 35  | 22   | 31    | 52     | 180    | 128               | 4                  |
| Indian Oil Corporation | 129 | 18   | 29    | 113    | 580    | 466               | 4                  |
| ICICI Bank             | 77  | 21   | 20    | 5      | 182    | 178               | 2                  |
| State Bank of India    | 98  | 10   | 18    | 112    | 319    | 206               | 2                  |
| Reliance Industries    | 326 | 12   | 15    | 122    | 751    | 630               | 2                  |
| HDFC                   | 203 | 17   | 25    | 27     | 159    | 132               | 1                  |

| WEALTH CREATION | 2004 ROCE > 1999 ROCE |                  |
|-----------------|-----------------------|------------------|
| STUDY           | NO. OF COMPANIES      | % WEALTH CREATED |
| 1999-2004       | 66/100                | 75               |
| 1998-2003       | 58/83                 | 77               |
| 1997-2002       | 55/85                 | 84               |
| 1996-2001       | 41/71                 | 91               |
| 1995-2000       | 50/100                | 65               |
| 1994-1999       | 65/100                | 56               |

### Classification By **Sales & Earnings Growth**

Two-third of the wealth has been created by companies with sales growth of <20%

Growth in market cap has been the same for companies with sales growth of above 20% as well as below 20%

The stock market tends to value high growth stocks richly

High earnings growth need not be associated with high sales growth

High earnings growth companies have been the fastest and biggest Wealth Creators

Companies, whose earnings grew by over 25%, have created almost 2/3rd of the Wealth

#### WEALTH CREATORS: CLASSIFICATION BY SALES GROWTH

| Total  | 100       | 100.0       | 30.2     | 26.6       |
|--------|-----------|-------------|----------|------------|
| >40    | 11        | 10.6        | 38.4     | 67.9       |
| 30-40  | 8         | 13.7        | 41.8     | 28.9       |
| 20-30  | 17        | 9.6         | 19.9     | 22.7       |
| 10-20  | 32        | 48.0        | 37.6     | 23.4       |
| 0-10   | 32        | 18.1        | 19.3     | 28.2       |
| GROWTH | COMPANIES | CREATED (%) | MCAP (%) | GROWTH (%) |
| SALES  | NO. OF    | WEALTH      | CAGR IN  | EARNINGS   |

#### WEALTH CREATORS: CLASSIFICATION BY EARNINGS GROWTH

| EARNINGS | NO. OF    | WEALTH      | CAGR IN  | SALES      |
|----------|-----------|-------------|----------|------------|
| GROWTH   | COMPANIES | CREATED (%) | MCAP (%) | GROWTH (%) |
| 0-10     | 16        | 9.5         | 21.3     | 6.4        |
| 10-20    | 14        | 10.9        | 31.4     | 17.9       |
| 20-30    | 26        | 47.5        | 32.9     | 17.4       |
| 30-40    | 9         | 4.4         | 40.8     | 8.6        |
| >40      | 35        | 27.6        | 29.0     | 20.4       |
| Total    | 100       | 100.0       | 30.2     | 16.4       |

### Classification By **Age Group**

While there has been a revival of the old economy, the technology sector has posted subdued performance

As a result, companies older than 25 years have made a major comeback

Still, the 11-20 age group is the most dominating amongst the Wealth Creators

New businesses born out of innovations, globalization and deregulation will keep the average age group much lower

(RS B)

| NO. OF YEARS | NO. OF COS. | WEALTH CREATED | % WEALTH CREATED |
|--------------|-------------|----------------|------------------|
| 0-10         | 6           | 1,326          | 22.6             |
| 11-20        | 26          | 918            | 15.7             |
| 21-30        | 14          | 617            | 10.5             |
| 31-40        | 13          | 1,347          | 23.0             |
| 41-50        | 11          | 487            | 8.3              |
| 51-60        | 15          | 648            | 11.1             |
| 61-70        | 7           | 209            | 3.6              |
| 71-80        | 2           | 68             | 1.2              |
| 81-90        | 1           | 21             | 0.4              |
| >90          | 5           | 221            | 3.8              |
| Total        | 100         | 5,862          | 100              |

Classification By

**Ownership: State v/s Private** 

State-owned companies have achieved 28 entries in the 100-Wealth Creator Group

ONGC and other Oil & Gas companies have been the main contributors

Despite being very large and handicapped by government controls, state-owned companies have delivered 25% earnings growth

Private companies have achieved 29% earnings growth

The market seems to be still skeptical about the sustainability of the state-owned companies' earnings

Therefore, they have still not been fully rewarded in terms of valuation

#### WEALTH CREATORS: STATE OWNED V/S PRIVATELY OWNED

|  | 1999-2004   |         |
|--|-------------|---------|
|  | STATE-OWNED | PRIVATE |
| Number of Wealth Creators                | 28          | 72      |
| 5-Year Earnings CAGR (%)                 | 25          | 29      |
| P/E (x) at the Beginning of Study Period | 6.2         | 18.4    |
| P/E (x) at the End of Study Period       | 9.7         | 16.6    |
| % Wealth Created                         | 48.5        | 51.5    |
| 5-Year Market Cap CAGR (%)               | 37          | 26      |

### Classification By **New v/s Old Economy**

Despite superior earnings growth by new economy companies, their market cap growth has been pulled down by the handicap of high purchase price

Despite having earnings growth of 26%, old economy has Created Wealth at over 30%, because the modest growth was purchased at reasonable valuations

"Purchase price decides the rate of return"

#### WEALTH CREATORS: NEW ECONOMY V/S OLD ECONOMY

|  | 1999- | -2004 |
|--|-------|-------|
|  | OLD   | NEW   |
| Number of Wealth Creators                | 93    | 7     |
| 5-Year Earnings CAGR (%)                 | 25.8  | 51.8  |
| P/E (x) at the Beginning of Study Period | 9.5   | 85.3  |
| P/E (x) at the End of Study Period       | 12.0  | 25.8  |
| % Wealth Created                         | 92.2  | 7.8   |
| 5-year Market Cap CAGR (%)               | 31.9  | 19.5  |

|  | 1998-2003 |     |
|--|-----------|-----|
|  | OLD       | NEW |
| Number of Wealth Creators                | 71        | 12  |
| 5-Year Earnings CAGR (%)                 | 25        | 64  |
| P/E (x) at the Beginning of Study Period | 13        | 35  |
| P/E (x) at the End of Study Period       | 7         | 25  |

### Classification By **Valuation Parameters**

If you want a doubler, buy at: Price to Book < 1xPrice to Earnings < 10x Price to Sales < 0.5

"There is absolutely no substitute for paying right price. In the bible, it says that love covers a multitude of sins. Well, in the investing field, price covers a multitude of mistakes. For human beings, there is no substitute for love. For investing there is no substitute for paying right price - absolutely none." (Van Dan Berg, OID, April 2004)

#### WEALTH CREATORS: CLASSIFICATION BY VALUATION PARAMETERS

|               | NO. OF COS | % WEALTH CREATED | CAGR IN MCAP % |
|---------------|------------|------------------|----------------|
| Price to Book |            |                  |                |
| <1            | 50.0       | 48.8             | 41.2           |
| 1-2           | 23.0       | 32.6             | 33.5           |
| >2            | 27.0       | 18.6             | 17.2           |
| Total         | 100.0      | 100.0            | 30.2           |
| P/E           |            |                  |                |
| <5            | 28.0       | 17.2             | 36.1           |
| 5-10          | 35.0       | 51.4             | 43.9           |
| >10           | 37.0       | 31.4             | 19.4           |
| Total         | 100.0      | 100.0            | 30.2           |
| P/Sales       |            |                  |                |
| < 0.5         | 43.0       | 27.7             | 40.6           |
| 0.5-1.0       | 24.0       | 21.4             | 28.3           |
| >1            | 33.0       | 51.0             | 27.6           |
| Total         | 100.0      | 100.0            | 30.2           |

|                     | 1999   |                 | 2004   |                 |
|---------------------|--------|-----------------|--------|-----------------|
|                     | SENSEX | WEALTH CREATORS | SENSEX | WEALTH CREATORS |
| Median P/Book Value | 1.78   | 0.92            | 3.34   | 2.65            |
| Median P/Sales      | 1.97   | 0.67            | 2.50   | 1.58            |
| Median P/E          | 13.53  | 7.25            | 18.65  | 13.54           |

**Wealth Creation** 

1999-2004

The 9<sup>TH</sup> Annual Study

# **Market Outlook**

To form our opinion on the markets, we have looked at the following parameters:

- 1. Corporate earnings
- 2. Interest rates
- 3. Valuations

### Expect sustainable earnings growth of 14%

The ratio of corporate earnings to GDP is about 4%, which we believe is easily sustainable for the next two years

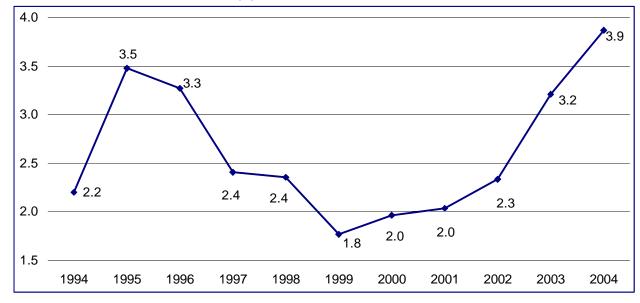
In the US, the ratio of corporate earnings to GDP is about 8%

India's GDP has been growing at 12.44% (from Rs7.8t in 1993-94 to Rs25.2t in 2003-04) in nominal terms; we expect this growth to sustain

Therefore, profits of Sensex companies growing by a percentage or two higher, going forward, would not be out of place

This forms the basis of our assumption of a sustainable corporate earnings growth of 14%, going forward

#### INDIA: CORPORATE PROFIT TO GDP (%)



Interest rate differential, stronger currency to attract overseas funds

Global investment pool of over US\$60t; a mere US\$0.5t invested in India

Expect interest rates in India to hover in a 6-9% range for a long time to come

The Rupee is likely to remain relatively stronger than the US Dollar

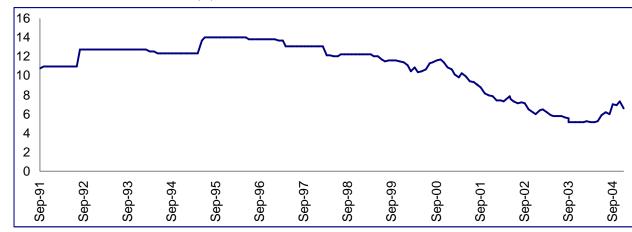
As a result, overseas funds would be attracted to Indian markets

INDIA: AN ATTRACTIVE INVESTMENT DESTINATION

| GLOBAL MA                            | ARKETS (TAKING US AS PROXY) | INDIAN MARKETS |
|--------------------------------------|-----------------------------|----------------|
| Debt                                 | US\$30t                     | US\$220b       |
| Equity                               | US\$30t                     | US\$300b       |
| Yield on 2-Year Government Paper (%) | 3.11                        | 6.21           |
| Currency                             | Weaker                      | Stronger       |

A massive value integration process between the developed world's US\$60t+ investment pool and the Indian capital market is underway. As Indian markets become fully integrated with the rest of the world, we may see an interest rate range of 6-9% for a long time to come. The difference in interest rate between the US and India, and the relatively stronger Rupee will keep pulling funds towards India, despite the difference in credit rating till risk-adjusted arbitrage opportunity is killed.

#### INDIA: 10-YEAR G-SEC YIELD (%)

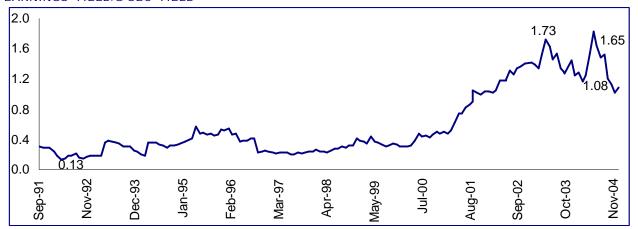


Despite the run-up, Indian equities are still reasonably valued

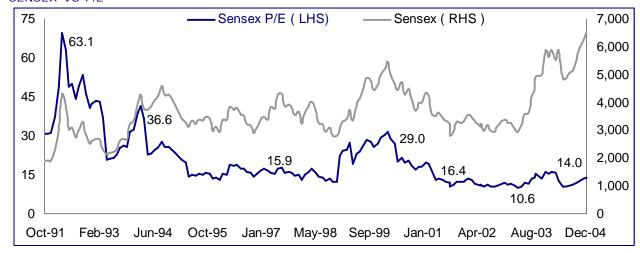
At an earnings yield/bond yield of around 1x, equities are still reasonably valued

Although the Sensex has doubled in the last two years, the Sensex P/E is well below its 10-year mean

#### EARNINGS YIELD/G-SEC YIELD



#### SENSEX VS P/E



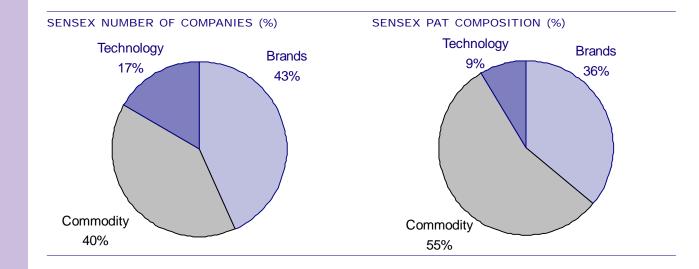
Implied 5-year Sensex return from current levels is 15%

At the current level of 6,174 (Friday, 14 January 2005), the implied return on the Sensex (including dividends) over the next five years is 15%

PV OF SENSEX TREATING IT AS A DISGUISED BOND

| 2,027    |
|----------|
| 3.2      |
| 20       |
| -        |
| n (%) 14 |
| 20       |
|          |

Note: PV of Sensex = PV of dividends for 'n' years + PV of the terminal value of the Sensex after 'n' years



### Wealth Creation

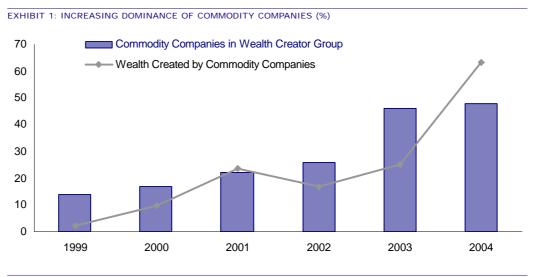
1999-2004

The 9<sup>TH</sup> Annual Study

# **Theme 2005**

### Back to Basics – the Era of Commodities

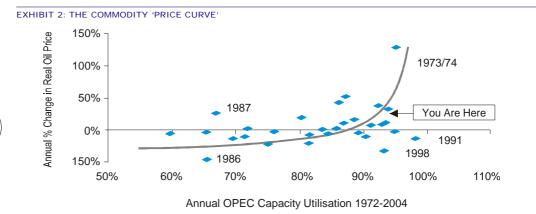
In our six studies on Wealth Creation starting from the one published in 2000, we observe that the dominance of commodity companies has been consistently increasing. These companies constitute 48% of the group of Wealth Creators in our current study and account for 60% of the total wealth created by the group. In our study published in 2000, commodity companies constituted merely 14% of the group of Wealth Creators and accounted for just 2.4% of the total wealth created.



Source: Inquire

### What drives the economic engine of commodity businesses?

Commodity businesses are unique in character. They are very large and homogeneous across the world. The factors that have a bearing on the profit making process of these businesses are aptly captured in the following exhibit. It appeared as part of an article on oil prices in The Financial Times dated 10 May 2004.



As capacity utilization
approaches 100%, prices
begin to rise rapidly

Source: EA/OPEC

Exhibit 2 explains the crux of commodity business economics. As demand for a commodity rises, producers produce and supply more to satisfy the incremental demand. However, as capacity utilization approaches 100%, incremental supply fails to keep pace with the rising demand. As a result of the squeeze in supply, prices of the commodity rise rapidly.

As demand, and consequently, capacity utilization increases, the profitability of commodity companies is favorably impacted – first, because of the resultant economies of scale and then, because of a gradual hardening of prices. As capacity utilization approaches 100%, there is a rapid rise in prices, resulting in an exponential increase in the profits of commodity companies.

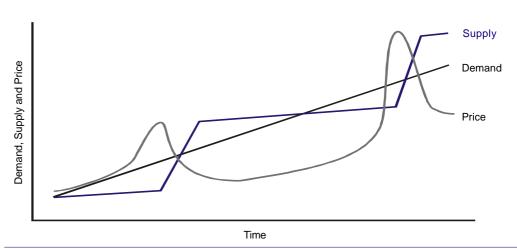
### Phases of the commodity cycle

Commodity businesses follow a distinct business cycle

Generally, the demand for commodities increases along with the increase in GDP at a steady pace. But supply increases are lumpy and not gradually paced as demand. When the price of a commodity, and thus, the profitability of the business are high, huge capital is attracted to the business. This leads to the total industry capacity increasing much above the aggregate demand. The resulting excess supply leads to a very rapid and sharp plunge in prices. When this situation arises, capacity creation comes to a total standstill. But demand keeps increasing steadily and again a stage is reached where increasing demand starts creating a squeeze and the prices of the commodity begin rising.

#### EXHIBIT 3: COMMODITY PRICE OSCILLATION

Price oscillations are the result of scarcity/ abundance of supply



Source: Inquire

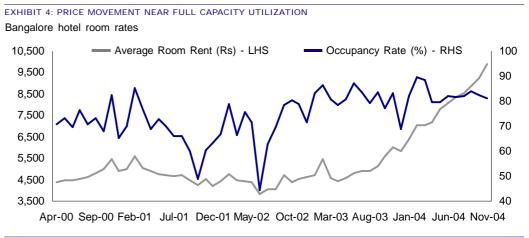
They face prolonged periods of low profitability or losses...

**Phase I – the gloom:** This phase is characterized by low capacity utilization, low prices and low profits (or losses). As demand rises, producers increase capacity utilization and supply more to satisfy the additional demand. Consumers enjoy higher bargaining power than producers and prices remain depressed.

...which give way to periods of painfully slow improvement in fortunes... **Phase II** – **the recovery:** This phase is characterized by moderate capacity utilization, gradual increase in prices and steadily rising profits. As demand rises, producers continue to increase capacity utilization and supply more to satisfy the additional demand. Producers benefit from both economies of scale and higher realizations, but consumers continue to enjoy higher bargaining power.

...and then to periods of galloping rises in profits

**Phase III** (a) – the squeeze: This phase is characterized by high capacity utilization, rapid increase in prices and exponential rise in profits. Producers continue to increase capacity utilization and supply more, but supply is unable to keep pace with the rising demand. As a result, there is a squeeze and prices begin rising rapidly. Bargaining power shifts from consumers to producers, who see their profits rising exponentially as a result of rapidly rising realizations and stable costs.

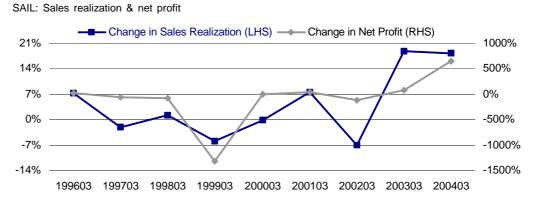


Source: Inquire

Exhibit 4 depicts the sharp rise in average hotel room rent in Bangalore with occupancy rate nearing 80%. In Bangalore, hotel rooms are in short supply and it takes about four years to build a new hotel. Demand is growing at a rapid pace. The effect is visible in hotel room rates, which have doubled in the last one-year and are still rising.

EXHIBIT 5: CHANGE IN COMMODITY REALIZATIONS AND RESULTING CHANGE IN PROFITS

A change in realizations results in a disproportionately large change in profits



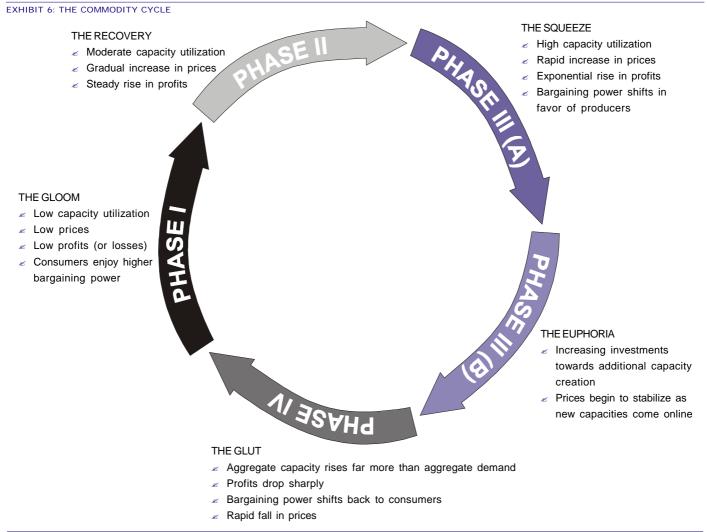
Source: Inquire

Exhibit 5 depicts the change in realizations per ton of steel and the corresponding change in Steel Authority of India's net profit. Though a decrease in interest cost is one of the factors favorably impacting the company's net profit, the exhibit nevertheless illustrates how a change in realizations results in a disproportionately large change in profits.

The abnormally high profits attract disproportionately large capital flows into these businesses...

**Phase III** (b) – the euphoria: This phase is characterized by a surge in investments towards creation of additional capacity. Usually, the high profits that are visible in phase III (a) attract disproportionately large amounts of capital. As new capacities become operational, the additional supply is absorbed and prices begin to stabilize.

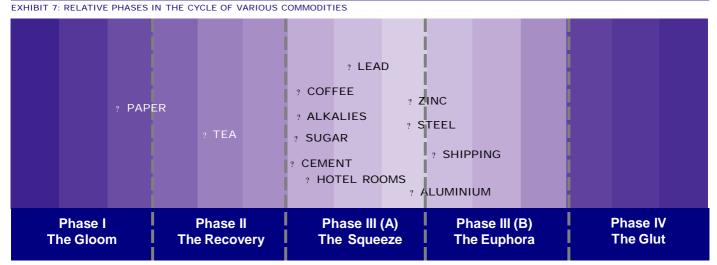
...and the resulting overcapacity once again leads to a glut **Phase IV** – **the glut:** This phase is characterized by aggregate capacity rising far higher than aggregate demand and rapid fall in prices. Capacity utilization falls drastically, resulting in much higher per unit cost. Bargaining power shifts back to consumers. As a result of the higher costs and falling realizations, producers see their profits dropping sharply.



Source: Inquire

#### What phase are we in?

We are currently in a phase where commodity companies are seeing exponential increases in profits **Somewhere between phase III (a) and III (b).** Capacity utilizations of most commodity companies are at historic highs. As is evident in their financial results for the last few quarters, their sales have been growing at high rates and their profits at even higher rates. Commodity prices – oil, metals, construction material, chemicals – are touching multi-year highs and demand shows no signs of abating. Some commodity companies have already begun brownfield expansion to raise capacity and a few have even announced megagreeenfield expansions.



Source: Inquire

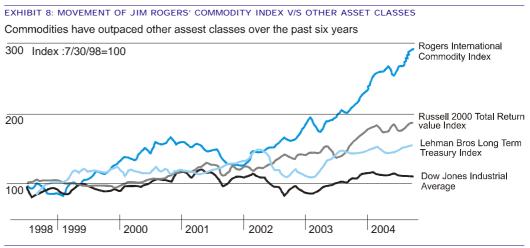
#### How long before we enter the glut?

Is a glut imminent? Not yet, believes Jim Rogers

This depends on the longevity of the squeeze. The squeeze can be softened either by an increase in supply or a decrease in demand. The time taken to create new supply depends on various issues specific to the respective businesses. For instance, in steel, mine leasing and equipment ordering could take 3-4 years. In shipping, shipyards can deliver new ships in two years, augmenting supply rapidly. In hotels, supply of new rooms could take 3-5 years. Till new supply emerges or demand decreases, the prices of commodities continue to rise rapidly. Demand for industrial commodities is, however, seen to be price inelastic for a considerable period of time even at much higher prices.

He predicts that commodity prices would continue rising for a decade

Jim Rogers, who has a credible track record in predicting commodity price movements, says, "For the next decade the value of basic materials will go sky high". In the late 1990s, he found that raw-material prices, adjusted for inflation, were approaching lows not seen since the great depression, and saw value in them. The index of raw materials that Rogers created in 1998 is already up 194% over the past 75 months.



Source: Inquire

#### 

Industrial commodities have two unique characteristics:

1) Demand for commodities is derived demand of larger economic activities. As they account for a small proportion of the value of the end product, the impact of the rise in the price of industrial commodities is much lower on the price of the end product.

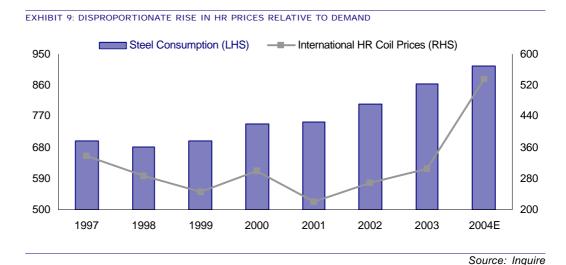
2) The commodities may not have very close substitutes.

These two factors make **demand inelastic** for a limited period of time, **even at much higher prices**. Commodity prices are altered by change in quantity supplied, causing the **movement of price along an unshifting demand curve**. Supply, if it has not kept pace with demand, is also difficult to build in a short while. This gives rise to a prolonged tight

An example of the situation can be seen from the global steel industry. The prices of HR coils had decreased from US\$339/ton in 1997 to US\$220/ ton in 2001, with no major new capacities being set up due to depressed prices. But, with increase in demand since 2001, the prices started rising. As no new capacities were under construction, the squeeze tightened and the price shot up to US\$537/ ton in 2004. This shows the disproportionate increase in prices during a squeeze.

Such long phases of prosperity are aided by demand inelasticity of commodities even at much higher prices...

squeeze.



Price and consumption of industrial commodities is not a function of the cost of production during the period of squeeze. This allows producers to make huge profits.

#### **Extent of exponentiality**

The extent of price rise during a squeeze is dependent on how inelastic demand is and how urgently the commodity/service is required. It also depends on the price of substitutes, if any. Affordability is another issue. For example, sugar price at Rs20/kg is almost 50% higher than the price six months ago, but it is not hurting yet.

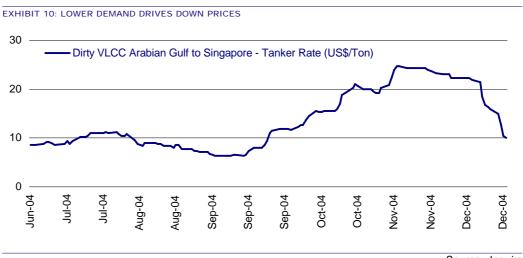
#### 

Typically, all commodities are investment/asset intensive. If adequate investments have not been made in these industries for long periods of time, there is likelihood of supply growing at a limited pace during the period of fresh capacity creation. It would mean that the ratio of supply growth to demand growth would remain less than 1. This leads to a sustained squeeze and further price rises lead to a situation where profitability becomes so high that disproportionate investments are attracted in either creating new capacities or creating cheaper substitutes. This alters the ratio of supply growth to demand growth to well above 1, which ends the squeeze.

### 

In the same vein, however, once scarcity abates, prices fall just as steeply At the end of a squeeze, commodity prices plummet just as quickly as they had risen during the squeeze. The recent crash in tanker rates is an apt example. Just before the onset of the winter, there is large-scale transportation of oil to the cold, western countries. The increase in demand for tankers in the pre-monsoon months led to the tripling of freight rates in two months. However, once demand weakened, the freight rates plummeted just as sharply.

...and in periods of scarcity, commodity prices scale astronomical highs



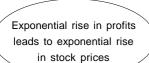
Source: Inquire

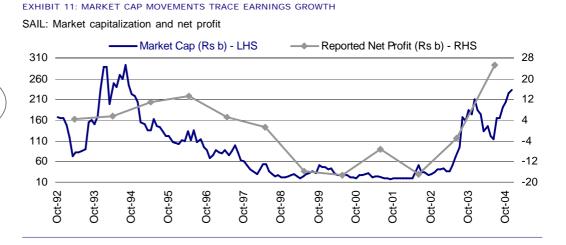
We can see from the above chart showing freight rates for VLCCs, how the freight rates more than tripled in two months and then fell sharply, as the demand weakened.

### Stock market strategy

Early identification of commodity market trends is the key to making large gains in commodity stocks

As we have discussed above, during the squeeze phase, prices of commodities rise rapidly, driving an exponential growth in profits of commodity companies. Their market cap movements trace the exponential earnings growth. Thus, if one is able to identify the trend early, one can make phenomenal gains by investing in commodity stocks.





SAIL: NET PROFIT AND MARKET CAP (RS B)

|            | MAR-96 | MAR-02 | MAR-04 |
|------------|--------|--------|--------|
| PAT        | 13.2   | -17.1  | 25.1   |
| Market Cap | 109.6  | 20.2   | 133.4  |

Source: Inquire

Exhibit 11 shows Steel Authority of India's net profit and market capitalization for the last 12 years. Observe how rapidly market cap fell in response to declining net profit during the period 1995-2002. Also see how the exponential rise in net profit from 2002 onwards has been rewarded by an exponential rise in market cap.

#### 

Conventional P/E-based valuation of commodity stocks could be misleading

Valuation of exponential profits is a challenging task. If one can spot the trend well ahead of time, the job is much simpler, but as the boom sets in as it is today, the job becomes difficult. The conventional P/E-based valuation is fraught with problems. It will definitely err in reflecting the total free cash flows during the period of exponential growth in profits.

A more accurate way to value the business would be to add the total profits during the period of exponential earnings growth and the residual value of business. This is typically reflected in private buyer transactions of the businesses. For instance, in the hotel business, the estimate of next three years' profits and the eventual selling price of the hotel property would give a good understanding of what the value should be.

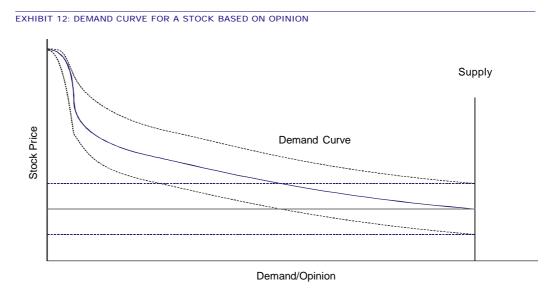
#### ∠ Understanding the price of a stock as it is

Marginal opinion, and not majority opinion determines stock prices

John Burr Williams says that the market price of a stock can only be an expression of opinion, not a statement of fact. According to him, "Today's opinion will make today's price, tomorrow's opinion tomorrow's price; and seldom if ever will any price be exactly right, as proved by the event." While all types of people might trade in the stock, no one group by itself can set the price. He further goes on to say, "Nor will it matter what the majority, however overwhelming, may think; for the last owner and he alone, will set the price. Thus, marginal opinion will determine market price."

There are always some would-be buyers of a stock that are excluded from ownership because to them the prevailing price seems too high. The bid and ask quotations reflect the opinions of the most optimistic non-owner and the least optimistic owner. Would-be buyers stand with cash in hand, waiting for some present owner to change his opinion on the stock (become bearish) and sell to them at the price they are willing to pay. If this happens, then the stock price falls to the level desired by the most optimistic would-be buyer. On the other hand, if the would-be buyers were to change their own opinions (become bullish), then the stock price would rise to the level desired by the least optimistic present owner. Thus, it is the last owner alone who sets the market price of a stock.

Since stock price is function of marginal opinion, a curve can be constructed of cumulative opinions on the stock.



Source: Inquire

Therefore, stocks, especially commodity stocks can be extremely volatile

We know that stock prices are altered by a change in business outlook. What really happens is that this results in a shift in the demand curve for the stock. Supply, however, remains static. In commodity companies, since profit growth can be exponential, demand for the stock also moves up exponentially when the business outlook for such companies improves. Therefore, the stock price rises exponentially. At the same time, when the outlook for the business is bad, nobody wants to own the stock. The stock price falls to exceptionally low levels.

#### **∠** When is it time to sell?

It might be a good strategy to "sell too soon", else it might be too late History tells us that no squeeze is permanent. The exponential earnings growth is built on the thin foundation of external factors like demand and supply. The demolition of the squeeze, and hence, profits happen at a rapid pace. Stock prices are a function of marginal opinion, and hence, the change in market prices is practically instantaneous. So, the only way one can make money is, as Jim Rogers says – **he sells too soon**. Ten years from now, Jim Rogers thinks that he will be saying to people, "Please sell oil", but they will be looking at him like he were a damned fool and say, "But everybody knows the price of oil is going to go to US\$1,000 and the price of gold is going to go to US\$10,000. Everybody knows".

Wealth Creation

1999-2004

The 9<sup>TH</sup> Annual Study

# **Appendix**

# Appendix I

| SR.      | COMPANY   | RC           | DE (%) | MARKET C | AP (RS B)     |                | △ MCAP/     | WEALTH | CREATED |
|----------|---|--------------|--------|----------|---------------|----------------|-------------|--------|---------|
| NO.      | NAME  | 1999         | 2004   | 1999     | 2004          | $\triangle$ ce | △ CE        | RS B   | %       |
| 1        | ABB   | 8.4          | 21.1   | 19.4     | 33.7          | 1.3            | 11.0        | 14.3   | 0.2     |
| 2        | Amtek Auto  | 16.0         | 24.9   | 0.1      | 6.1           | 2.5            | 2.4         | 5.4    | 0.1     |
| 3        | Apollo Tyres  | 10.1         | 12.4   | 1.7      | 9.5           | 3.9            | 2.0         | 6.5    | 0.1     |
| 4        | Asahi India Glass                                       | 11.1         | 55.6   | 0.7      | 10.0          | 3.0            | 3.1         | 9.3    | 0.2     |
| 5        | Ashok Leyland   | 1.9          | 18.9   | 5.1      | 30.2          | -5.2           | -4.9        | 26.7   | 0.5     |
| 6        | Asian Paints (India)                                    | 25.2         | 27.8   | 10.2     | 29.1          | 0.8            | 23.5        | 19.0   | 0.3     |
| 7        | Associated Cement Companies                             | 5.5          | 14.8   | 19.7     | 45.2          | 3.1            | 8.3         | 22.1   | 0.4     |
| 8        | Aurobindo Pharma  | 43.3         | 16.8   | 4.9      | 19.1          | 11.5           | 1.2         | 12.3   | 0.2     |
| 9        | Bajaj Auto  | 20.0         | 19.8   | 73.5     | 92.3          | 16.5           | 1.1         | 20.7   | 0.4     |
| 10       | Ballarpur Industries                                    | 2.5          | 8.3    | 1.3      | 10.8          | 8.2            | 1.2         | 7.4    | 0.1     |
| 11       | Bank of Baroda  | 14.5         | 18.8   | 13.5     | 71.8          | 22.3           | 2.6         | 58.3   | 1.0     |
| 12       | Bank of India   | 9.2          | 26.3   | 12.8     | 28.8          | 16.4           | 1.0         | 17.5   | 0.3     |
| 13       | Bharat Electronics                                      | 12.2         | 25.3   | 2.3      | 39.8          | 7.0            | 5.4         | 37.5   | 0.6     |
|          |   |              |        |          |               |                |             |        |         |
| 14       | Bharat Harry Flastriagle                                | 9.1          | 56.5   | 3.0      | 27.6          | -3.0           | -8.3        | 26.8   | 0.5     |
| 15       | Bharat Heavy Electricals                                | 17.7         | 12.4   | 58.1     | 148.0         | 25.8           | 3.5         | 89.8   | 1.5     |
| 16       | Bharat Petroleum Corporation                            | 23.2         | 29.0   | 29.7     | 143.6         | 38.5           | 3.0         | 113.9  | 1.9     |
| 17       | Bongaigaon Refinery                                     | 5.7          | 54.9   | 2.2      | 15.5          | -0.4           | -37.6       | 13.3   | 0.2     |
| 18       | Century Textiles & Industries                           | -10.9        | 9.8    | 2.8      | 8.9           | -6.5           | -0.9        | 8.2    | 0.1     |
| 19       | Chennai Petroleum Corporation                           | 19.3         | 24.8   | 4.7      | 21.7          | 19.8           | 0.9         | 16.9   | 0.3     |
| 20       | Cipla   | 25.5         | 24.5   | 28.0     | 70.2          | 9.8            | 4.3         | 42.6   | 0.7     |
| 21       | Container Corporation Of India                          | 30.0         | 25.9   | 11.4     | 46.5          | 8.3            | 4.2         | 35.1   | 0.6     |
| 22       | Corporation Bank  | 19.7         | 18.2   | 9.4      | 40.2          | 17.9           | 1.7         | 26.2   | 0.4     |
| 23       | Crompton Greaves  | 4.2          | 21.8   | 1.9      | 8.1           | -5.8           | -1.1        | 7.6    | 0.1     |
| 24       | Dr Reddys Laboratories                                  | 13.5         | 13.8   | 22.8     | 74.5          | 16.1           | 3.2         | 45.4   | 0.8     |
| 25       | Dredging Corporation of India                           | 14.5         | 21.5   | 2.9      | 14.3          | 4.3            | 2.6         | 11.3   | 0.2     |
| 26       | DSP Merrill Lynch                                       | 13.1         | 29.2   | 4.4      | 10.4          | 4.2            | 1.4         | 6.0    | 0.1     |
| 27       | Engineers India   | 21.5         | 10.5   | 8.5      | 18.0          | 2.4            | 3.9         | 9.5    | 0.2     |
| 28       | e-Serve International                                   | 4.2          | 46.3   | 1.6      | 7.5           | 0.8            | 7.1         | 5.9    | 0.1     |
| 29       | FDC   | 24.6         | 33.1   | 3.4      | 10.8          | 1.3            | 5.9         | 7.5    | 0.1     |
| 30       | Federal Bank  | 8.0          | 21.0   | 0.8      | 8.2           | 3.3            | 2.3         | 7.5    | 0.1     |
| 31       | GAIL (India)  | 25.6         | 25.1   | 52.2     | 180.2         | 34.6           | 3.7         | 128.0  | 2.2     |
| 32       | Grasim Industries                                       | 6.3          | 21.6   | 11.4     | 98.0          | 6.5            | 13.3        | 86.4   | 1.5     |
| 33       | Great Eastern Shipping Co.                              | 10.4         | 31.2   | 6.2      | 24.2          | 8.1            | 2.2         | 20.2   | 0.3     |
| 34       | Gujarat Ambuja Cements                                  | 14.3         | 16.7   | 22.1     | 49.1          | 14.4           | 1.9         | 21.4   | 0.4     |
| 35       | HDFC Bank   | 24.3         | 18.9   | 13.8     | 107.8         | 23.5           | 4.0         | 83.3   | 1.4     |
| 36       | Hero Honda Motors                                       | 40.4         | 64.0   | 35.0     | 97.9          | 9.3            | 6.8         | 63.0   | 1.1     |
| 37       | Hindalco Industries                                     | 17.4         | 12.2   | 34.7     | 112.6         | 54.8           | 1.4         | 73.2   | 1.2     |
| 38       | Hinduja TMT   | 2.2          | 16.8   | 0.4      | 8.3           | 3.1            | 2.6         | 7.7    | 0.1     |
| 39       | Hindustan Petroleum Corporation                         |              | 24.6   | 43.1     | 172.2         | 30.1           | 4.3         | 129.1  | 2.2     |
| 40       | Hindustan Zinc  | 7.8          | 26.8   | 3.8      | 42.9          | 10.4           | 3.8         | 39.1   | 0.7     |
| 41       | HDFC  | 16.9         | 25.1   | 27.2     | 158.8         | 202.8          | 0.6         | 132.4  | 2.3     |
| 42       | ICICI Bank  | 20.5         | 20.4   | 4.5      | 182.4         | 77.0           | 2.3         | 165.2  | 2.8     |
|          | IDBI  |              |        |          |               |                |             |        |         |
| 43<br>44 | Indian Oil Corporation                                  | 13.7<br>18.0 | 5.8    | 20.0     | 37.9<br>570.6 | -34.7          | -0.5<br>3.6 | 22.9   | 0.4     |
|          | Indian Oil Corporation  Indian Petrochemicals Corporati |              | 30.4   | 113.5    | 579.6         | 128.9          |             | 466.2  | 8.0     |
| 45       | <u>'</u>  |              | 12.0   | 27.7     | 45.5          | -32.4          | -0.6        | 17.9   | 0.3     |
| 46       | Indian Rayon & Industries                               | 7.5          | 10.4   | 5.5      | 11.3          | -3.9           | -1.5        | 6.5    | 0.1     |
| 47       | Indo Rama Synthetics (India)                            | -49.4        | 32.8   | 1.2      | 9.4           | -4.4           | -1.9        | 10.7   | 0.2     |
| 48       | Infosys Technologies                                    | 23.5         | 38.2   | 96.7     | 329.1         | 26.8           | 8.7         | 230.9  | 3.9     |
| 49       | ING Vysya Bank  | 7.2          | 9.4    | 1.8      | 10.8          | 2.0            | 4.4         | 8.1    | 0.1     |
| 50       | Ipca Laboratories                                       | 15.1         | 29.2   | 1.7      | 8.2           | 1.0            | 6.6         | 6.5    | 0.1     |

# Appendix I

| SR.      | COMPANY                           | RO    | DE (%) | MARKET C | CAP (RS B) |                | △ MCAP/      | WEALTH       | H CREATED |
|----------|-----------------------------------|-------|--------|----------|------------|----------------|--------------|--------------|-----------|
| NO.      | NAME                              | 1999  | 2004   | 1999     | 2004       | $\triangle$ ce | △ CE         | RS B         | %         |
| 51       | ITC                               | 28.8  | 25.1   | 236.3    | 257.9      | 30.5           | 0.7          | 21.4         | 0.4       |
| 52       | Jammu and Kashmir Bank            | 19.9  | 25.5   | 1.4      | 24.0       | 11.7           | 1.9          | 22.6         | 0.4       |
| 53       | Jindal Iron & Steel Company       | 2.0   | 29.8   | 0.6      | 8.0        | -2.7           | -2.7         | 7.4          | 0.1       |
| 4        | Jubilant Organosys                | 18.4  | 38.6   | 0.8      | 17.2       | 2.4            | 6.8          | 16.4         | 0.3       |
| 5        | Kirloskar Oil Engines             | 5.4   | 17.0   | 0.6      | 5.4        | -1.0           | -4.7         | 5.7          | 0.1       |
| 6        | Kochi Refineries                  | 28.8  | 30.7   | 8.9      | 28.7       | 7.8            | 2.5          | 19.8         | 0.3       |
| 57       | Kotak Mahindra Bank               | 3.7   | 13.0   | 0.7      | 24.1       | -3.4           | -6.9         | 22.1         | 0.4       |
| 8        | Larsen & Toubro                   | 12.9  | 18.0   | 58.2     | 142.7      | -27.3          | -3.1         | 88.0         | 1.5       |
| 59       | LIC Housing Finance               | 20.8  | 17.4   | 2.9      | 13.7       | 61.4           | 0.2          | 10.8         | 0.2       |
| 60       | Lupin                             | 18.3  | 21.2   | 0.8      | 26.1       | 6.6            | 3.8          | 24.8         | 0.4       |
| 61       | Mahindra & Mahindra               | 15.4  | 19.8   | 23.6     | 53.9       | -4.6           | -6.6         | 32.7         | 0.6       |
| 2        | Mangalore Refinery                | 1.1   | 31.2   | 8.2      | 96.2       | 3.2            | 27.4         | 78.4         | 1.3       |
| 3        | Matrix Laboratories               | 2.6   | 75.8   | 0.1      | 17.4       | 2.0            | 8.7          | 17.0         | 0.3       |
| 64       | Micro Inks                        | 36.4  | 14.6   | 1.7      | 12.8       | 7.2            | 1.5          | 8.3          | 0.1       |
| 35       | Monsanto India                    | 32.3  | 21.1   | 2.8      | 11.1       | 2.9            | 2.9          | 6.9          | 0.1       |
| 66       | Moser Baer (India)                | 25.2  | 16.6   | 2.0      | 34.1       | 32.2           | 1.0          | 22.9         | 0.4       |
| 67       | Motherson Sumi Systems            | 17.9  | 35.4   | 0.7      | 7.7        | 1.2            | 6.0          | 7.1          | 0.1       |
| 88       | Motor Industries Company          | 17.0  | 25.7   | 13.7     | 43.1       | 5.2            | 5.7          | 29.5         | 0.5       |
| 69       | Neyveli Lignite Corporation       | 13.4  | 16.7   | 18.1     | 92.0       | 29.7           | 2.5          | 75.1         | 1.3       |
| 70       | Nicholas Piramal India            | 14.2  | 48.1   | 11.6     | 28.3       | 3.0            | 5.5          | 17.8         | 0.3       |
| '1       | Oil & Natural Gas Corpn           | 11.4  | 21.4   | 168.7    | 1,198.4    | 195.5          | 5.3          | 1,029.7      | 17.6      |
| '2       | Oriental Bank of Commerce         | 18.7  | 25.6   | 6.0      | 58.0       | 14.5           | 3.6          | 51.9         | 0.9       |
| '3       | Ranbaxy Laboratories              | 8.4   | 34.3   | 77.1     | 174.8      | 5.3            | 18.5         | 98.4         | 1.7       |
| 4        | Rashtriya Chemicals & Fertilizers |       | 13.5   | 3.8      | 24.2       | -2.3           | -8.8         | 20.4         | 0.3       |
| 5        | Raymond                           | 11.0  | 12.6   | 5.6      | 11.0       | -1.7           | -3.2         | 7.3          | 0.1       |
| 6        | Reliance Capital                  | 8.0   | 7.6    | 4.4      | 16.9       | 1.1            | 11.8         | 12.3         | 0.2       |
| 7        | Reliance Energy                   | 13.2  | 8.4    | 20.0     | 134.4      | 32.7           | 3.5          | 98.7         | 1.7       |
| '8       | Reliance Industries               | 18.2  | 16.3   | 121.8    | 751.3      | 326.3          | 1.9          | 513.5        | 8.8       |
| 9        | Satyam Computer Services          | 43.6  | 21.5   | 42.2     | 92.8       | 21.7           | 2.3          | 42.6         | 0.7       |
| 30       | Saw Pipes                         | 11.3  | 23.1   | 0.9      | 8.2        | 0.1            | 66.3         | 7.3          | 0.1       |
| 31       | Sesa Goa                          | 13.8  | 31.3   | 2.4      | 9.4        | 0.1            | 106.7        | 7.0          | 0.1       |
| 32       | Shipping Corporation of India     | 11.1  | 11.9   | 5.6      | 35.9       | -1.7           | -17.9        | 30.3         | 0.5       |
| 33       | Siemens                           | -76.2 | 28.4   | 7.6      | 32.5       | 1.9            | 12.8         | 24.1         | 0.4       |
| 34       | State Bank of Bikaner and Jaipur  |       | 26.3   | 1.2      | 8.5        | 7.3            | 1.0          | 7.4          | 0.1       |
| 35       | State Bank of India               | 9.9   | 18.2   | 112.3    | 318.8      | 98.3           | 2.1          | 206.5        | 3.5       |
| 36       | State Bank Of Travancore          | 11.4  | 26.4   | 1.1      | 7.8        | 5.4            | 1.2          | 6.6          | 0.1       |
| 37       | Steel Authority of India          | -22.5 | 49.9   | 24.4     | 133.4      | -142.8         | -0.8         | 109.1        | 1.9       |
| 88       | Sterling Biotech                  | 14.2  | 14.2   | 0.2      | 12.6       | 4.7            | 2.6          | 11.6         | 0.2       |
| 39       | Sterlite Industries (India)       | 12.4  | 13.9   | 8.4      | 36.6       | 12.3           | 2.3          | 27.7         | 0.5       |
| 90       | Sun Pharmaceuticals Industries    | 22.2  | 31.5   | 7.6      | 60.3       | 7.6            | 7.0          | 53.3         | 0.9       |
| 91       | Sundaram Clayton                  | 12.5  | 22.3   | 2.4      | 8.5        | 1.0            | 6.4          | 6.1          | 0.1       |
| 92       | Tata Chemicals                    | 10.8  | 11.0   | 13.0     | 23.0       | -4.8           | -2.1         | 8.3          | 0.1       |
| 93       | Tata Iron & Steel Co.             | 6.8   | 38.7   | 38.2     | 141.7      | -12.1          | -8.5         | 111.0        | 1.9       |
| 93<br>94 | Tata Motors                       | 2.6   | 22.6   | 43.3     | 173.3      | -12.1          | -6.5<br>-5.5 | 129.2        | 2.2       |
| 94<br>95 | Tata Power Company                | 10.0  | 10.4   | 8.3      | 74.7       | 38.8           | -5.5<br>1.7  | 60.8         | 1.0       |
| 95<br>96 | Thermax                           | 11.0  | 15.8   |          | 8.9        | -0.2           |              | 5.9          |           |
| 96<br>97 |                                   |       |        | 3.4      | 13.4       |                | -26.4<br>1.6 |              | 0.1       |
| 97<br>98 | United Phosphorus UTI Bank        | 8.0   | 12.5   | 3.1      | 34.0       | 6.5            | 1.6          | 13.9<br>28.4 | 0.2       |
|          |                                   | 15.1  | 24.5   | 1.8      |            | 9.3            | 3.5          |              | 0.5       |
| 99       | Wipro                             | 27.3  | 26.1   | 184.4    | 316.4      | 29.2           | 4.5          | 125.3        | 2.1       |
| 100      | Zee Telefilms                     | 31.9  | 5.6    | 18.4     | 55.4       | 20.7           | 1.8          | 23.2         | 0.4       |

# Appendix II

| RANK                 | CORDING TO SPEED OF WEALTH CREAT  COMPANY | P/E (X) |             | PAYBACK   | WEALTH CREATED |       | MCAP    |
|----------------------|---|---------|-------------|-----------|----------------|-------|---------|
| NO.                  | NAME                                      | 1999    | 2004        | RATIO (X) | RS B           | %     | CAGR (% |
| 1                    | Matrix Laboratories                       | 14.6    | 23.2        | 0.0       | 17.0           | 0.29  | 137.    |
| 2                    | Sterling Biotech                          | 1.1     | 27.5        | 0.1       | 11.6           | 0.20  | 114.    |
| 3                    | Amtek Auto                                | 1.4     | 14.4        | 0.1       | 5.4            | 0.09  | 111     |
| 4                    | Lupin                                     | 6.1     | 27.4        | 0.2       | 24.8           | 0.42  | 95      |
| 5                    | Jammu and Kashmir Bank                    | 1.6     | 5.9         | 0.1       | 22.6           | 0.39  | 76      |
| 6                    | Bharat Electronics                        | 4.4     | 12.6        | 0.2       | 37.5           | 0.64  | 76      |
| 7                    | Jubilant Organosys                        | 3.3     | 21.5        | 0.4       | 16.4           | 0.28  | 75      |
| 8                    | Jindal Iron & Steel Company               | 5.6     | 6.6         | 0.3       | 7.4            | 0.13  | 66      |
| 9                    | Asahi India Glass                         | 29.3    | 13.9        | 0.5       | 9.3            | 0.16  | 66      |
| 10                   | Motherson Sumi Systems                    | 7.7     | 15.8        | 0.5       | 7.1            | 0.12  | 63      |
| 11                   | Hindustan Zinc                            | 5.0     | 10.6        | 0.4       | 39.1           | 0.67  | 62      |
| 12                   | ICICI Bank                                | 7.1     | 11.1        | 0.1       | 165.2          | 2.82  | 60      |
| 13                   | Federal Bank                              | 31.1    | 6.1         | 0.2       | 7.5            | 0.13  | 60      |
| 14                   | UTI Bank                                  | 5.9     | 12.2        | 0.2       | 28.4           | 0.49  | 60      |
| 15                   | Hinduja TMT                               | 13.3    | 11.0        | 0.2       | 7.7            | 0.13  | 57      |
| 16                   | Oriental Bank of Commerce                 | 2.6     | 8.4         | 0.3       | 51.9           | 0.13  | 57      |
| 17                   | Saw Pipes                                 | 3.3     | 10.8        | 0.4       | 7.3            | 0.03  | 54      |
| 18                   | Indo Rama Synthetics (India)              | -0.8    | 5.5         | 0.7       | 10.7           | 0.12  | 54      |
| 19                   | Kirloskar Oil Engines                     | 4.1     | 7.6         | 0.2       | 5.7            | 0.10  | 52      |
| 20                   | Sun Pharmaceuticals Industries            | 12.8    | 21.5        | 0.8       | 53.3           | 0.10  | 51      |
| 20<br>21             | Kotak Mahindra Bank                       | 5.5     | 30.6        | 0.8       | 22.1           | 0.38  | 49      |
| 22                   | State Bank of Bikaner and Jaipur          | 1.3     | 2.8         | 0.2       | 7.4            | 0.38  | 48      |
| 23                   | Bongaigaon Refinery                       | 6.3     | 5.1         | 0.7       | 13.3           | 0.13  | 48      |
| 23<br>24             | Oil & Natural Gas Corpn                   | 6.1     | 13.8        | 0.7       | 1,029.7        | 17.57 | 48      |
| 2 <del>4</del><br>25 | ·   | 8.1     | 22.1        | 0.9       | 26.8           | 0.46  | 47      |
| 25<br>26             | Bharat Forge                              | 5.2     | 18.6        | 0.9       | 27.7           | 0.46  | 47      |
|                      | Sterlite Industries (India)               |         |             |           | 6.6            |       |         |
| 27                   | State Bank Of Travancore                  | 2.6     | 3.2<br>12.6 | 0.2       |                | 0.11  | 47      |
| 28                   | Grasim Industries                         | 7.0     |             | 0.5       | 86.4           | 1.47  | 46      |
| 29                   | Shipping Corporation of India             | 2.8     | 13.1        | 0.3       | 30.3           | 0.52  | 45      |
| 30                   | Rashtriya Chemicals & Fertilizers         | 3.6     | 14.4        | 1.1       | 20.4           | 0.35  | 44      |
| 31                   | Moser Baer (India)                        | 9.6     | 10.5        | 0.2       | 22.9           | 0.39  | 44      |
| 32                   | Ashok Leyland                             | 24.8    | 15.6        | 0.8       | 26.7           | 0.46  | 42      |
| 33                   | Great Eastern Shipping Company            | 4.9     | 5.2         | 0.5       | 20.2           | 0.34  | 42      |
| 34                   | HDFC                                      | 8.1     | 18.6        | 0.8       | 132.4          | 2.26  | 4       |
| 35                   | Steel Authority of India                  | -1.5    | 5.3         | -0.7      | 109.1          | 1.86  | 40      |
| 36                   | HDFC Bank                                 | 16.8    | 21.1        | 0.9       | 83.3           | 1.42  | 40      |
| 37                   | Neyveli Lignite Corporation               | 3.2     | 8.0         | 0.4       | 75.1           | 1.28  | 40      |
| 38                   | Bank of Baroda                            | 3.2     | 7.4         | 0.4       | 58.3           | 1.00  | 39      |
| 39                   | Mangalore Refinery                        | 58.2    | 20.9        | -0.9      | 78.4           | 1.34  | 39      |
| 40                   | Reliance Energy                           | 7.4     | 36.6        | 1.2       | 98.7           | 1.68  | 39      |
| 41                   | Tata Power Company                        | 5.0     | 14.2        | 0.3       | 60.8           | 1.04  | 39      |
| 42                   | Indian Oil Corporation                    | 5.1     | 8.3         | 0.5       | 466.2          | 7.95  | 38      |
| 43                   | Dredging Corporation of India             | 7.1     | 8.4         | 0.4       | 11.3           | 0.19  | 37      |
| 44                   | Bharat Petroleum Corporation              | 4.2     | 8.5         | 0.5       | 113.9          | 1.94  | 37      |
| 45                   | Apollo Tyres                              | 5.5     | 13.5        | 0.5       | 6.5            | 0.11  | 37      |
| 46                   | LIC Housing Finance                       | 2.8     | 8.2         | 0.3       | 10.8           | 0.18  | 36      |
| 47                   | Ipca Laboratories                         | 8.1     | 13.3        | 0.7       | 6.5            | 0.11  | 36      |
| 48                   | Chennai Petroleum Corporation             | 2.3     | 5.4         | 0.4       | 16.9           | 0.29  | 35      |
| 49                   | ING Vysya Bank                            | 6.0     | 18.2        | 0.6       | 8.1            | 0.14  | 35      |
| 50                   | Crompton Greaves                          | 8.1     | 11.4        | -2.0      | 7.6            | 0.13  | 33      |

## Appendix II

| RANK     | COMPANY                            |        | (X)  | PAYBACK   | WEALTH ( | CREATED | MCA     |
|----------|------------------------------------|--------|------|-----------|----------|---------|---------|
| NO.      | NAME                               | 1999   | 2004 | RATIO (X) | RS B     | %       | CAGR (9 |
| 51       | Micro Inks                         | 7.4    | 17.5 | 0.7       | 8.3      | 0.14    | 33      |
| 52       | Reliance Industries                | 7.1    | 14.6 | 0.6       | 513.5    | 8.76    | 32      |
| 53       | Container Corporation Of India     | 8.1    | 13.1 | 0.8       | 35.1     | 0.60    | 32      |
| 54       | e-Serve International              | 252.1  | 16.8 | 1.7       | 5.9      | 0.10    | 32      |
| 55       | Hindustan Petroleum Corporation    | 4.8    | 9.0  | 0.6       | 129.1    | 2.20    | 31      |
| 56       | Sesa Goa                           | 7.4    | 9.5  | 1.3       | 7.0      | 0.12    | 31      |
| 57       | Reliance Capital                   | 4.8    | 16.0 | 0.7       | 12.3     | 0.21    | 31      |
| 58       | Siemens                            | 21.7   | 23.3 | 1.4       | 24.1     | 0.41    | 30      |
| 59       | United Phosphorus                  | 9.0    | 11.6 | 1.2       | 13.9     | 0.24    | 30      |
| 60       | Motor Industries Company           | 19.6   | 18.4 | 1.9       | 29.5     | 0.50    | 30      |
| 61       | Tata Iron & Steel Co.              | 13.5   | 8.1  | 0.9       | 111.0    | 1.89    | 29      |
| 62       | Sundaram Clayton                   | 15.1   | 18.5 | 1.5       | 6.1      | 0.10    | 29      |
| 63       | Corporation Bank                   | 4.9    | 8.0  | 0.5       | 26.2     | 0.45    | 28      |
| 64       | GAIL (India)                       | 4.9    | 9.6  | 0.7       | 128.0    | 2.18    | 28      |
| 65       | Infosys Technologies               | 71.5   | 26.5 | 2.4       | 230.9    | 3.94    | 27      |
| 66       | FDC                                | 16.8   | 16.3 | 1.6       | 7.5      | 0.13    | 26      |
| 67       | Kochi Refineries                   | 2.6    | 5.2  | 0.5       | 19.8     | 0.34    | 26      |
| 68       | Century Textiles & Industries      | -3.1   | 11.6 | 1.8       | 8.2      | 0.14    | 26      |
| 69       | Industrial Development Bank Of Ind | ia 1.6 | 9.4  | 0.5       | 22.9     | 0.39    | 25      |
| 70       | Bank of India                      | 6.4    | 2.9  | 0.4       | 17.5     | 0.30    | 24      |
| 71       | Aurobindo Pharma                   | 9.8    | 15.1 | 1.0       | 12.3     | 0.21    | 23      |
| 72       | Asian Paints (India)               | 13.2   | 19.7 | 1.5       | 19.0     | 0.32    | 23      |
| 73       | Tata Motors                        | 44.4   | 21.4 | 6.0       | 129.2    | 2.20    | 23      |
| 74       | State Bank of India                | 10.9   | 8.7  | 0.8       | 206.5    | 3.52    | 23      |
| 75       | Hero Honda Motors                  | 28.8   | 13.4 | 1.5       | 63.0     | 1.07    | 22      |
| 76       | Hindalco Industries                | 6.1    | 13.4 | 0.9       | 73.2     | 1.25    | 2       |
| 77       | Thermax                            | 8.9    | 16.4 | 1.8       | 5.9      | 0.10    | 20      |
| 78       | Bharat Heavy Electricals           | 10.7   | 22.5 | 1.9       | 89.8     | 1.53    | 20      |
| 79       | Cipla                              | 24.3   | 22.9 | 2.3       | 42.6     | 0.73    | 20      |
| 80       | Larsen & Toubro                    | 12.4   | 26.8 | 2.4       | 88.0     | 1.50    | 19      |
| 81       | Raymond                            | 6.5    | 8.4  | 0.7       | 7.3      | 0.12    | 19      |
| 82       | Indian Rayon & Industries          | 5.2    | 8.6  | 2.6       | 6.5      | 0.11    | 18      |
| 83       | Ballarpur Industries               | 8.0    | 11.0 | 0.3       | 7.4      | 0.13    | 18      |
| 84       | Ranbaxy Laboratories               | 65.9   | 22.0 | 3.6       | 98.4     | 1.68    | 17      |
| 85       | Dr Reddys Laboratories             | 44.1   | 26.3 | 1.6       | 45.4     | 0.77    | 17      |
| 86       | Engineers India                    | 7.2    | 21.7 | 1.6       | 9.5      | 0.16    | 16      |
| 87       | DSP Merrill Lynch                  | 20.4   | 10.5 | 1.1       | 6.0      | 0.10    | 15      |
| 88       | Mahindra & Mahindra                | 10.3   | 15.5 | 1.9       | 32.7     | 0.56    | 15      |
| 89       | Associated Cement Companies        | 34.6   | 22.6 | 4.1       | 22.1     | 0.38    | 1:      |
| 90       | Gujarat Ambuja Cements             | 14.7   | 14.6 | 1.5       | 21.4     | 0.37    | 14      |
| 91       | Monsanto India                     | 25.6   | 16.0 | 1.4       | 6.9      | 0.12    | 13      |
| 92       | Satyam Computer Services           | 58.0   | 16.7 | 2.1       | 42.6     | 0.73    | 12      |
| 93       | Nicholas Piramal India             | 26.3   | 15.0 | 2.3       | 17.8     | 0.30    | 12      |
| 94       | Tata Chemicals                     | 7.1    | 10.4 | 1.3       | 8.3      | 0.14    | 12      |
| 95       | ABB                                | 51.5   | 27.2 | 4.7       | 14.3     | 0.14    | 12      |
| 96       | Wipro                              | 164.4  | 34.6 | 5.1       | 125.3    | 2.14    | 1.      |
| 90<br>97 | Indian Petrochemicals Corporation  | 94.2   | 16.6 | 2.6       | 17.9     | 0.31    | 1(      |
| 98       | Bajaj Auto                         | 13.6   | 12.6 | 2.3       | 20.7     | 0.35    | 3       |
| 99       | Zee Telefilms                      | 30.1   | 48.1 | 3.1       | 23.2     | 0.33    | 6       |
| 100      | ITC                                | 37.9   | 16.2 | 3.6       | 21.4     | 0.40    | 1       |

Note: Payback Ratio = (Market Capitalization of 1999) / (Sum of Profits for the five years 2000-2004). CE = Capital Employed

### NOTES

### NOTES

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