Stock Market: Does patience pay*

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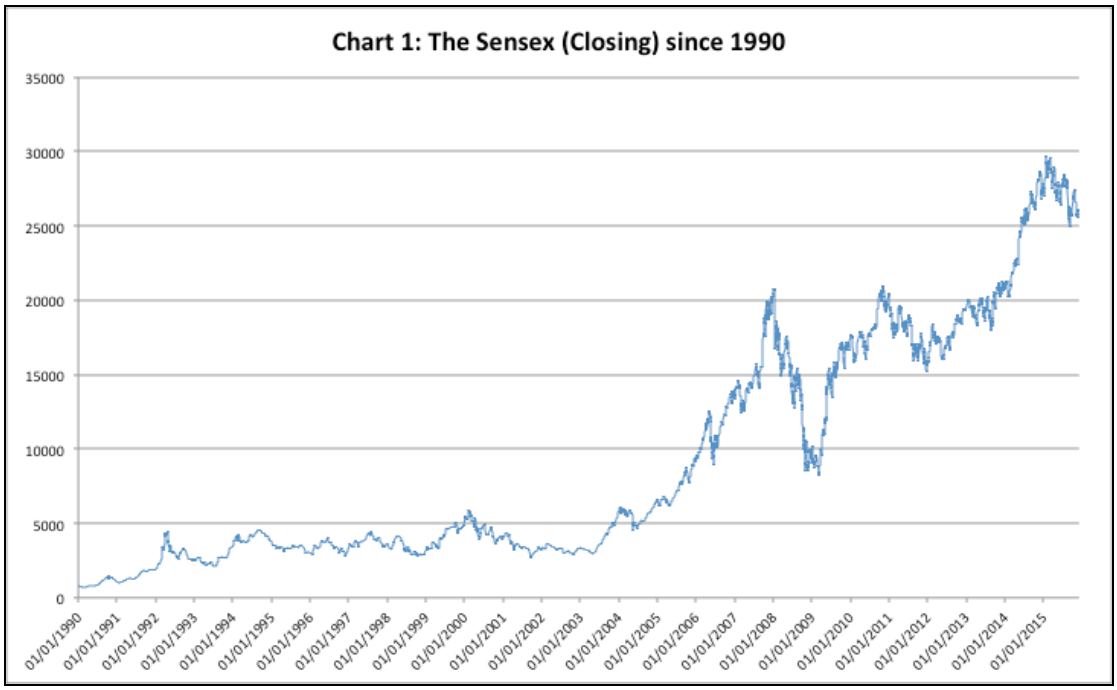
One consequence of the liberalisation of rules relating to entry into and operation of investors in India's stock markets has been the hugely increased presence of foreign institutional investors (FIIs), domestic financial institutions (DFIs) and high net worth individuals (HNIs). But that increased presence has been accompanied by a considerable increase in market volatility. With a substantial share of the investment made by these entities being geared to reaping capital gains, many of their bets are short term in nature leading to short term volatility as well. The latter in turn has encouraged bouts of fraudulent activity, epitomised by the Harshad Mehta and Ketan Parekh scams, that result in spikes and crashes in the market over short periods.



This kind of volatility is intensified by the fact that markets in developing countries like India tend to be thin and shallow because a few decision-makers account for much of the investment and a relatively small proportion of shares of firms whose equity is actively traded is available for trading. Not surprisingly, there has been a view that small investors, whether in the form of retail investors directly trading in the market (facilitated by electronic trading accounts) or those exposed to the market through financial intermediaries such as mutual funds, insurance companies and pension funds, need to exercise extreme caution. Being less informed and less influential, these investors, it is argued by some, are more likely to lose than gain, by entering and exiting markets at the wrong time.

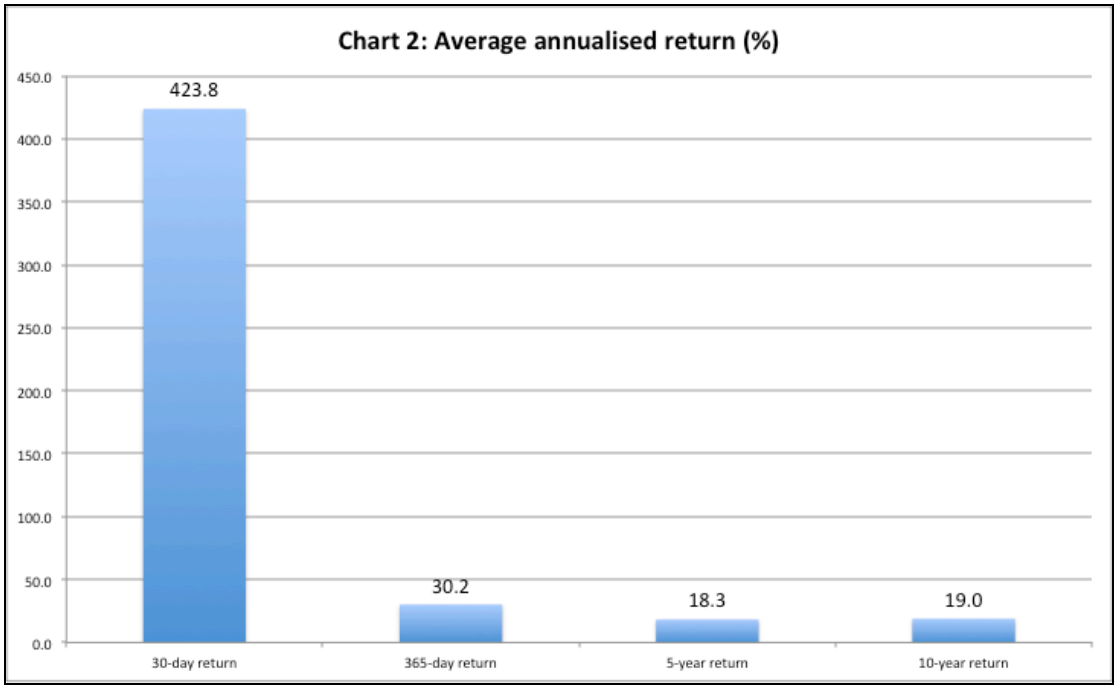
Yet, changes in rules have increased the exposure of small investors to the market, with the government encouraging that trend with the new pension scheme and enhanced space for mutual funds and similar institutions.Underlying this policy thrust is an assessment that, so long as investors choose to remain invested in a portfolio of equities over the long run of say 5 to 10 years or more, they are bound to earn returns that beat conventional ways of holding financial savings such as fixed deposits with

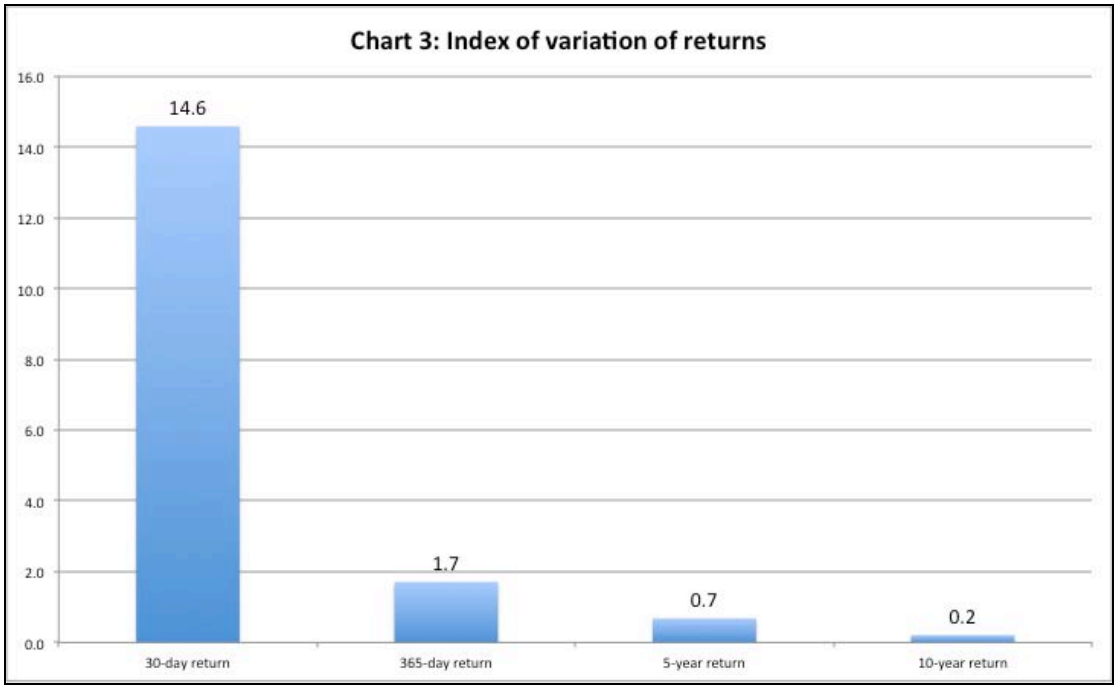
banks or corporates. This assessment seems to be backed by the experience during the 2000s (Chart 1), when market indices such as the Sensex, while subject to fluctuations and volatility, rose substantially over long periods from a little above 3,000 in the early 2000s (2001-03) to close to 30,000 by 2015.

It must be noted that there is no reason to believe that over the next 15 years to 2030 (say), the movement of the Sensex would in proportionate terms be of the same magnitude, despite the high level of its current (base) value. After all, despite liberalisation, the Sensex was almost flat with little upwards movement during the 1990s. Yet, it is of interest to examine whether in actual returns in the long run (of 5 to 10 years) during the 2000s, or the reward for patience, was necessarily and significantly higher than what could be earned in shorter periods of a month to a year.

Movements of the Sensex reflect the movement of the weighted prices of a bundle of stocks that are among the most actively traded in the Bombay Stock Exchange. Consider a set of investors investing in such a bundle, some of whom choose to hold stock only for a period of 31 trading days, others for 365 trading days and yet others for trading periods of 5 and 10 years. Since investors could have entered the market on any trading day beginning first January 1990, we can calculate a set of returns for investors opting for each of the different investment periods, for investments made on each consecutive trading day starting 1 January 1990. The variation of these returns for each investment period tells us how much investors choosing that time length would have lost or gained depending on when they entered into and exited from the market. The average of consecutive-day investment returns captures the mean around which the actual values of returns lie, and an indicator such as the coefficient of variation captures the likelihood that actual returns can be significantly different from the mean in either direction (gain or loss).

Estimates of the annualised return that would have been obtained by an investor in a Sensex-bundle of shares over continuous and consecutive 31-trading day periods starting January 1, 1990 and ending early December 2015, indicate that the figure varies from a negative 99.8 per cent (at the time of the crisis of 2008) and close to a positive 35,000 per cent (during the Harshad Metha-scam-induced boom of 1992, when the index rose by 100 per cent over a 31 day period ending April 4). The average annualised continuous and consecutive-31-day return over the whole period was 423.8 per cent (Chart 2). As we move from a 31-day cycle to 365-days, that average annualised return falls sharply to 30.2 per cent. But in this case too, the return varies from a negative 53.1 per cent to a positive 458.2 per cent. What is true, however, is that the coefficient of variation in consecutive-period returns falls from 14.6 to 1.71 (Chart 3), when we move from a 31-day cycle to a 365-day cycle. That is while the average of returns that could be garnered falls significantly, the probability that an investor is significantly off the average depending on when she entered or exited reduces substantially.





This tendency to decline partially persists when we extend the calculation of annualised returns to long-period investments of 5 or 10 years. In the case of 5 years the range over which the rate varies falls to between a negative 8.0 per cent and a positive 44.6 per cent, with an average of 18.3 per cent, and for 10 years from a now-positive low of 7.9 per cent to a high of 29.2 per cent with an average of 19.0 per cent. Thus, the average rate of return falls significantly when we move from shorter to longer investment periods, though the 5-year and 10-year returns show less variation with a coefficient of variation of 0.7 and 0.2 respectively. Thus, while the investment outcome depends on when an investor enters into and exits from the market, the probability of obtaining a return significantly different from the average is lower in the case of longer periods. It is indeed true that an annual return in the 18-19 per cent

range on a financial investment is indeed substantial. But in the case of the five-year investment cycle, in a fifth of the instances the investor would get a return of less than 8 per cent, which could be taken as the annual return that can be obtained on a near-risk free fixed deposit. It is only in the case of a 10-year investment that the minimum return obtained would be close to 8 per cent. But that outcome is related to the fact that the period since the early 2000s was one in which the market was buoyant over a long period.

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