

Understanding the Indian Financial Environment

The big facts about the US financial environment



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Using very long time series in the US, three important facts are: (a) An inflation target of 2%, which is successfully delivered by the US Fed; (b) Bond return of 2.7% and (c) Equity premium of 3 percentage points.

In the US, there is a fair understanding about these three numbers and confidence that these values will hold in the coming decades.

The fact that these three things are known in the US with fair precision generates an environment of confidence. In the US, we know the probability distribution; the only thing not known is how future draws from the distribution will work out. All economic agents-households and firms-are able to look into the future and make plans knowing these foundations. This ability to make plans at long time horizons generates good outcomes for all economic agents and for society at large.

How might we think about the Indian economic environment?

In India, we don't know the probability distribution governing these three things (inflation, bond returns, equity returns). This generates a qualitatively higher level of uncertainty. Every financial or real sector investor faces bigger difficulties owing to this lack of knowledge. Many investments don't get made, many financial strategies (e.g. retirement planning) are not undertaken owing to the inability to peer into the future and figure out what will happen. The phrases 'ambiguity' or 'Knightian uncertainty' are used when describing an environment where we don't know the probability distribution of the shocks that we face.

It is interesting and important for us to understand the fundamental facts about the Indian economic environment. When institutional reforms generate enhanced clarity, and take us into the world of shocks from a known distribution, this will give a qualitative reduction in uncertainty and a better climate for all economic agents.

This is partly about better understanding the past, and partly about envisioning the new institutional machinery which is coming together. Let's start at the past.

Long-run equity returns and returns to equity

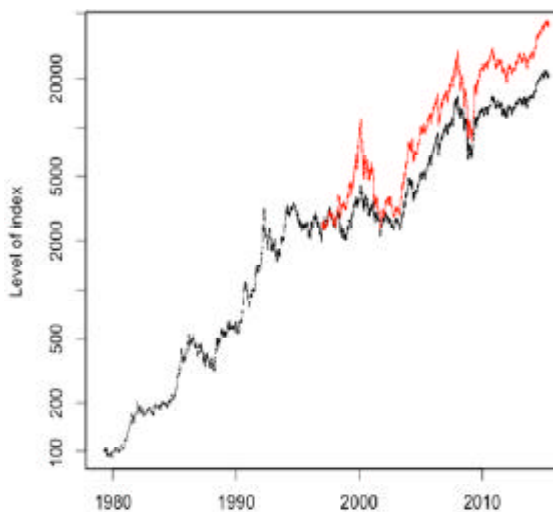
Investment in India

India is an equity market dominated financial system. The failures of public policy have hampered the working of the bond market and the banking system. On 20 May 2015 the market capitalisation of the CMIE Cospi index was Rs.101 trillion, and it had 2318 firms. On 17 April 2015, the stock of 'non food credit' of banks, to all firms and individuals in India (and not just 2318 big firms) was Rs.65 trillion. The equity market is the dominant and market-based foundation of the financial system.

An array of interesting questions swirl around equity investment in India:

1. Do equities in India deliver a strong equity premium, in the long run?
2. How well does 'dumb' investment in index funds perform? Is the market so inefficient that active management beats the index funds?
3. There are over 4000 listed firms with a very great heterogeneity within them. Should one just focus on the top 50, or are there interesting investment strategies by delving into smaller and/or less liquid firms? If so, what's the appropriate investment technology to use when going there?

The long run performance of the stock market indexes with the biggest stocks



The graph above starts with the oldest time-series of equity index returns-the BSE Sensex. My data here starts from 3 April 1979. This is a 30-stock index which had idiosyncratic rules about modification of the index set. From 3 July 1990 onwards, we switch over to Nifty, where the rules about changes in the index set are systematic and sensible. The black line above is the long time series obtained by pasting the two.

Over a span of 36.17 years, the black line has compound nominal INR returns of 15.91%. On average, this is a doubling every 4 years. Of course, a part of this is inflation. We don't have sound inflation data for 36.17 years so it's not possible to compute the average real INR returns on the Indian stock market index.

Nifty is the 50 biggest firms in India who have adequate stock market liquidity. Nifty Junior delves one notch below them to the next 50 big firms who have high stock market liquidity. You may think it's only a small step away from Nifty firms in terms of the large-cap high-liquidity character. Data for Nifty Junior starts from 1 January 1997. This is superposed in the graph above as the red line.

Over this span of the most recent 18.41 years, Nifty gave compound returns of 12.62%. In this period, Nifty Junior gave compound returns of 17.17%. This was a premium of 455 basis points per year.

The graph above can be interpreted as follows. Suppose you invested Rs.100 in the BSE Sensex index fund on 17 July 1979, then switched to a Nifty index fund on 3 July 1990, and 100% switched to a Nifty Junior index fund on 1 January 1997. In this case, over the 36.17 years in the graph, you'd have got a 400x return, from 100 to 40,000.

These are eye-popping numbers, but they are all in nominal INR. When expressed as USD or when expressed in real terms, the picture becomes good, but not eye-popping.

While these sample means are computed over long time horizons, it's important to keep the uncertainty of these estimates in mind. As an example, consider the estimate for BSE Sensex + Nifty above: a mean return of 15.91% over a time horizon of 36.17 years. The annualised standard deviation of this market index works out to 24.9%. This gives a distribution of the mean that has a standard deviation of $s/\sqrt{N} \approx 4.14$. A 95% confidence interval would be 8.11 percentage points on each side of the point estimate of 15.91 per cent. Hence, even though 36.17 years seems like a lot of data, it isn't enough to be really confident about the numerical estimate for the average equity returns in the historical data.

All this information does not take us all the way to an estimate of the equity premium, as we don't know much about the riskless rate of return in this period. See this article by Suyash Rai on alternative methods for estimating the equity risk premium.

Interpretation and speculation

1. These are strong rates of return over long time periods. The BSE Sensex / Nifty index had long run average returns of 15.91% and the Nifty Junior fared significantly better.
2. These returns were achievable by index funds. There is no slip between cup and lip when going from this evidence to realised investment performance.
3. The sharp difference between returns on Nifty and returns on Nifty Junior (455 basis points of a difference in returns per year, over 18.41 years) suggests that

there may be many interesting subsets within the 4000+ listed firms in India with heterogeneity in returns. We shouldn't paint the entire Indian equity market with the Nifty brush.

4. Can active management do better? Three factors are at work. Is the market inefficient? Does the fund manager know how to beat the market? Do you trust the fund manager to work for you? There is ground for concern about all three checkpoints.
5. We have evidence, in mid cap stocks, that foreign institutional investors do much worse in security selection when compared with domestic institutional investors. This evidence suggests that foreign investors should sub-contract to domestic money managers or buy index funds. From the viewpoint of foreign investors, there are three issues. First, there is high home bias against India; global portfolios are systematically underweighted against Indian equities and fixed income. Second, one chunk of that investment problem (the Nifty / Nifty Junior asset class) can be done well using index funds. Third, they need to explore smaller firms and figure out answers to the three factors of market inefficiency, fund manager capability and the principal-agent problem of the manager.
6. I am not aware of sound studies of mutual fund performance. I am not aware of sound databases about mutual fund returns. It would be interesting to look at how mutual funds are faring, to subject them to benchmark risk based on mixing Nifty and Nifty Junior, and see the extent to which there is outperformance.
7. The case for private investment in public equities (PIPE) or hedge fund structures, which charge 2+20, would lie in three claims: (a) The market is inefficient (b) The manager understands these inefficiencies and is able to exploit them (c) The 2+20 structure aligns the incentives of the manager. At the same time, 2+20 is a very large tax; you'd need very large market inefficiencies to make it work.
8. It's time to look behind Nifty Junior in the construction of index funds.

A speculative view about the big facts about the future Indian investment environment

If we peer into the future, we can get an outline of the big numbers in macro/finance in India:

1. There is some slow progress in Indian financial policy. RBI now has an objective — CPI inflation of 4%. In time, the conflicts of interest at RBI will be removed. In time, the Bond-Currency-Derivatives Nexus will get built, which will give RBI the ability to deliver on the inflation target. In time, RBI will become a sound institution. Once all this happens, CPI inflation in India would become stable with a tight distribution around the mean of 4%.
2. Sound practices in monetary policy and sound practices in public debt management will give a government bond yield curve with perhaps 6% on average at the short end and 9% at the long end. Perhaps the average

nominal return for government bonds will be 7%, as most EMs tend to finance a lot at short maturities.

3. Equity returns in the past came from (a) India's one-time abandonment of socialism and (b) High returns for extremely high risk given the bad macro/finance institutional environment. I think the equity premium in the future will be lower; it will be 5 to 6 percentage points. This will be higher than what's seen in the US (where risk is very low) but lower than what we've enjoyed in India in the past. This will give nominal INR returns on the Indian equity index of 11 to 12 per cent.
4. I think that when the US inflation target is 2% and the Indian inflation target is 4%, we will get a long-run average USD/INR exchange rate depreciation of 0% to 1% per year with a volatility of 13% per year. The latter number is typical of floating exchange rates from inflation targeting EMs. It will make sense for most global investors to invest in Indian fixed income and equity without needing to fully hedge USD/INR fluctuations.

In summary, I think that in a few years, the Indian financial reforms will be completed. After that, when we peer into coming decades, there may be an internally consistent picture around five numbers:

1. An inflation target of 4%;
2. A short rate of 6% on average;
3. Average nominal return for government bonds of 7%;
4. An equity premium of 5 to 6 percentage points and
5. Mean USD-INR returns of depreciation of 0 to 1 percent per year with a volatility of 13%.

Clarity on these foundations, supported and made possible by the financial reforms, will make a difference to the lives of all economic agents in the country.

This is of course all speculative. I am surely off track on many elements of this story. For everyone working with Indian macro and finance, however, it is an interesting exercise to arrive at an opinion on the five numbers above, which are the skeleton frame of Indian finance. It would be interesting to think about the internal consistency of this picture, and chip away in finding flaws and fixing them.
