

**Discussion
of
The Indian Household Finance Landscape**

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Introduction

When I concluded my discussion of this paper at the IPF, I noted that this was “...a thought provoking, unique paper.... [but it] is still a work in progress. I look forward to a more detailed parsing of its implications for financial theory”. In the current version the authors have substantially revised it, incorporating the comments of both the discussants and the participants. I view the revised version as complementary to the excellent paper, “Sources of Growth in the Indian Economy” by Bosworth et al (IPF 2006-7). It is likely to become a definitive reference on Indian household finance.

To briefly summarize the paper: the authors use the latest wave (2012) of **the All India Debt and Investment Survey (AIDIS)** to characterize and provide a snapshot of the asset holdings of Indian households. They also construct similar measures for other countries -- China, Australia, U.K, Germany and the US, to facilitate international comparisons.

In the first part of the paper the authors highlight two observations:

- a) Compared to households in developed countries, households in India and China hold a substantially higher fraction of nonfinancial assets in their portfolios.
- b) Household portfolios in India hold a relatively higher fraction of gold bullion than any other developed or developing country.

In the second part of the paper, they focus on two questions:

- a) Why are the portfolio allocations of Indian and Chinese households different from households in developed markets?
- b) Do the portfolio allocations of Indian households differ by region, age, education and family characteristics?

Assets and Liabilities of Indian Households

The strength and the major contribution of the paper is its comprehensive documentation of data in section 4. Table 1 summarizes the assets and liabilities of Indian households using a number of statistics, panels A and B in Figure 8 illustrate the variation along the life cycle and wealth distribution, while Table 2 documents the regional variation in household balance sheets. The authors are careful in pointing out the limitations of their data set¹. A striking feature of the data in Table 1 is the extreme skewness in the distribution of assets and liabilities. It reinforces the conclusions of a Credit Suisse report² that in 2014, the top 1% of the Indian population owned 49.0% of the country's total wealth, and the top decile 74%. Further, the bottom 50% owned 4.5% and the bottom 80% owned 16.6%.

Given this highly skewed wealth distribution, the value weighted asset holdings represent the holdings of the top decile, rather than holdings of an 'average household'.³ The mean and median household allocations are very different.

The reader should be cautioned that the data presented is a cross sectional snapshot of the composition of household savings. It is one (invaluable) observation of a stochastic process characterizing the evolution of different types of asset holdings. The Indian economy is in transition and this process is unlikely to be ergodic – ensemble averages and averages over time are likely to be quite different. It would be unwise to use this one observation for either policy prescriptions or to evaluate portfolio allocations.

¹ Given the data limitations, it would have been comforting had the authors had done a robustness check on the micro data using the macro data in the National Accounts and reported the findings.

² Global Wealth Data Handbook. Credit Suisse (2014)

³ In the Indian context, this is a meaningless concept. Unfortunately, the authors extensively use the potentially misleading phrase 'average household'. For example, on page 11 they state, "In India, the average household holds 77% of its total assets in real estate".

To elaborate, at a point in time, all assets must be held. The aggregate portfolio holdings simply reflect the value-weighted average of the available assets in the economy. While an individual investor or a group of investors may allocate assets taking prices as given, in the aggregate, at a point in time, the aggregate holdings simply reflect the assets available in the economy. Aggregate household net worth mimics the economy wide fluctuation in asset valuation. As the relative market value of different asset classes changes over time this will be reflected as changes in aggregate portfolio weights, even without active portfolio rebalancing.

For example, had this analysis been done in the 1990s, the holdings of debt and equity assets would have been negligible. Thus, rather than being suggestive of long term portfolio decisions of Indian households, the results reported in the paper may simply reflect the degree of financial development in India.

As figure 1A illustrates, it is only very recently that financial markets in India amounted to any significant fraction of GDP, so it should not come as a surprise that this is mirrored in the balance sheets of the households.

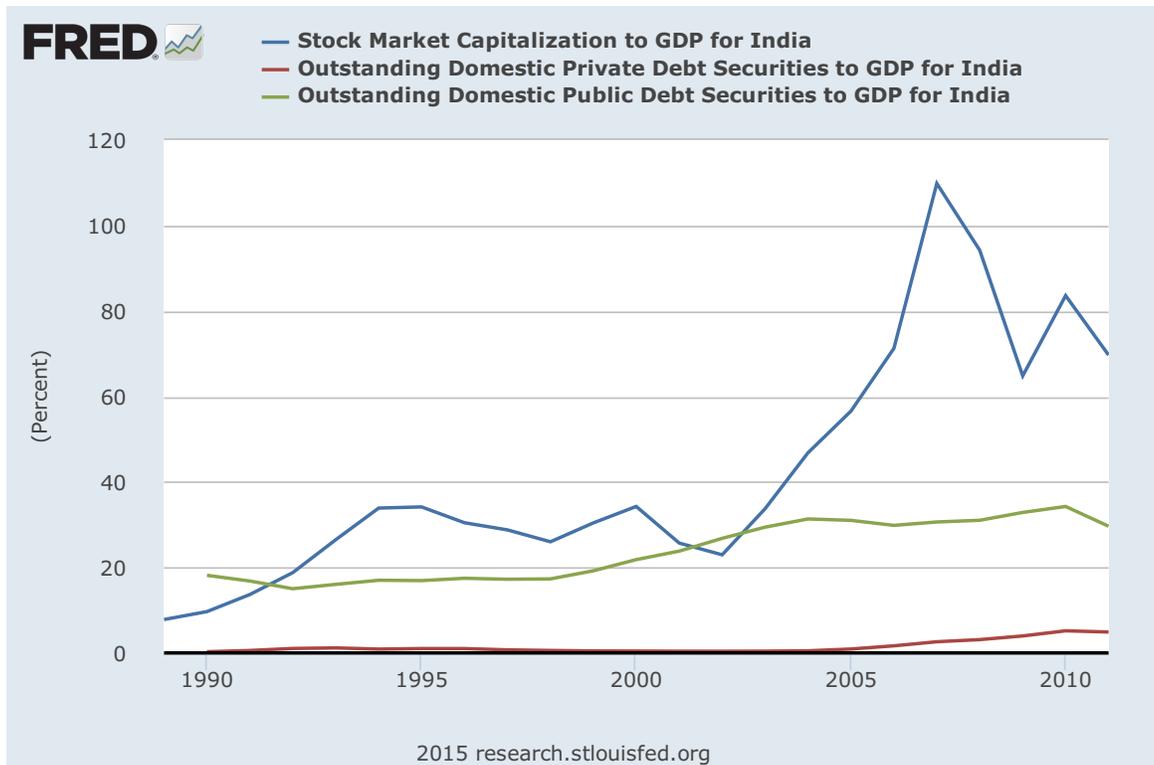


Figure1A: Evolution of the Financial Sector in India: 1990 -2011

In contrast, in developed economies, financial assets are a substantially larger multiple of GDP. In the United States, for example, they have averaged about 250% of GDP over the past 25 years. See figure 1B.

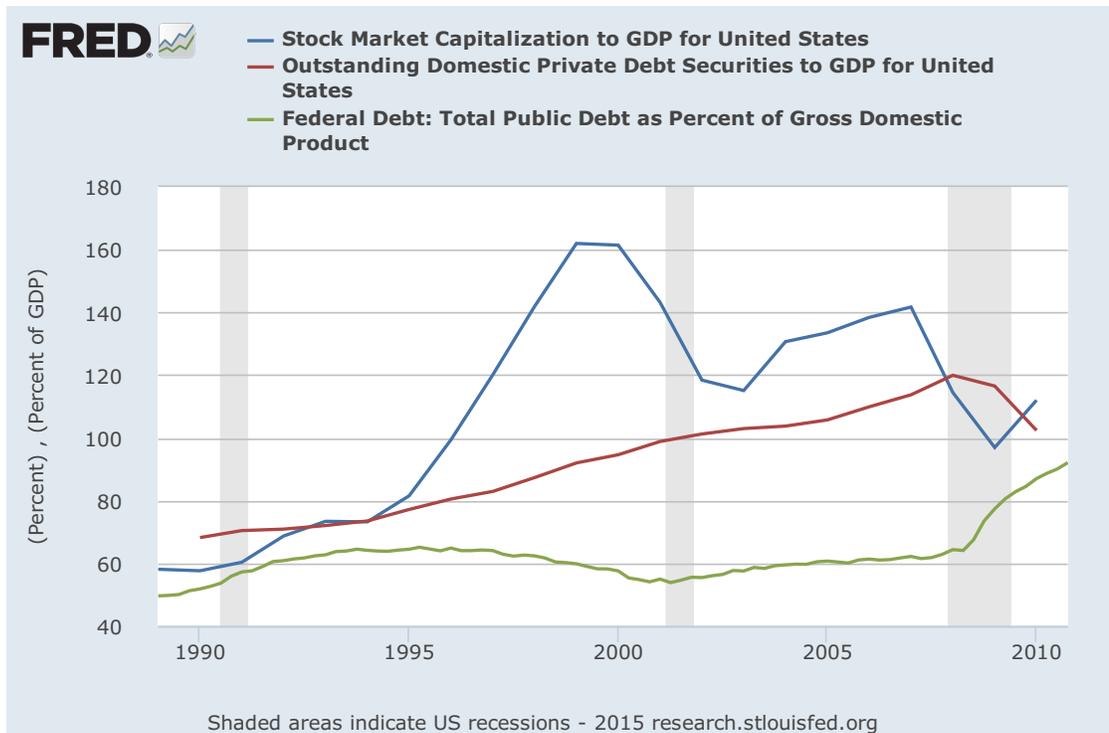


Figure 1B: Evolution of the Financial Sector in the US: 1990 -2011

Household Borrowing and Lending

For every borrower there must be a lender. In equilibrium, the total amount lent by households (D_L) is equal to the total amount of borrowed by households, (D_B) plus Government debt (D_G)⁴. Since household lending (D_L) is a subset of financial assets held by households (FA_H). It follows that $FA_H > D_B$. However, in Table 1 mean financial assets are listed as INR 24,681 while mean household debt (D_B) is listed as INR 120,845. This needs to be clarified.

⁴ Corporate debt in India is insignificant. However, since households own corporations, corporate borrowings show up as both assets and liabilities of households and hence nets out.

Lifecycle effects

I find the lack of any significant lifecycle effects in Figure 8 to be somewhat anomalous. Historically, the static one period mean–variance model has been the basis of portfolio advice. In this setting, the appropriate objective is end-of-period wealth maximization and the only risk management tool that needs to be employed is diversification. However, recent advances in portfolio theory suggest that this objective may be inappropriate. As the correlation of asset returns with wage income changes over the lifecycle, this is likely to lead to significant differences in portfolio allocations over the lifecycle.⁵

Allocations may also differ due to differing objectives over the life cycle, such as wealth accumulation (while young) vs. wealth preservation (nearing retirement) and different preferences for bequests.

In the absence of a bequest motive, the optimal strategy for a household is to buy a life annuity rather than maximize wealth at retirement. In a recent paper, Mehra, Piguillem and Prescott (2011) show that, even with a 2% lower rate of return, it is welfare enhancing for households that derive little or no utility from bequests to invest in annuities, to insure against outliving their savings.

Cross Country Comparisons

While it is illuminating to document portfolio allocations of households in China, Australia, U.K, Germany and the US, these statistics add little to key message of the paper, especially since the authors provide no justification for their selection.⁶ Do these countries represent a benchmark or ideal that Indian households should mimic? If so, why? The paper is silent on this issue.

⁵ See for example Constantinides et al (2002) or Davis and Mehra (2001)

⁶ Why not look at household portfolios in economies in transition such as Taiwan, Korea, Indonesia, Malaysia, Thailand, Brazil or Argentina?

Angus Deaton (1990) starts this paper *Saving in Developing Countries: Theory and Evidence* with the sentence “ I can think of four good reasons for studying the savings in developing countries separately from saving behavior in developed countries”. I think the same applies to the composition of savings, especially since portfolio allocations in developed countries are likely to be drawn from a stationary distribution along a balanced growth path.⁷

There is another, orthogonal observation that questions the relevance of these cross-country comparisons. Portfolio allocations across households vary considerably with the wealth level. For the US this is illustrated in figure 2. Given the extreme skewness in wealth distribution in India, is it appropriate to compare the ‘averages’ in India with average portfolio holdings in countries where the wealth distribution is less skewed? If indeed a comparison must be made, a more appropriate comparison set would be the holdings of the ultra rich in various countries. (See Ravina, Viceira and Walter (2016)).

⁷ See my earlier comment.

US Household Portfolios: Snapshot 2007

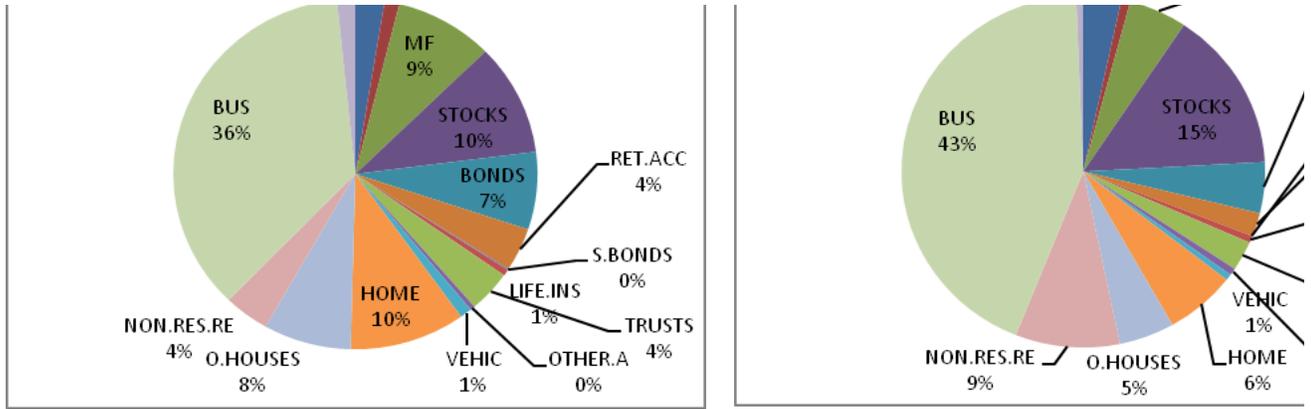


Figure 2. Portfolios of Households in 2007 Survey of Consumer Finances

OTH.N.FIN = Other misc. nonfinancial assets. LIQ = All types of transaction accounts (cash holdings). CDS = certificates of deposits. MF = mutual funds. STOCKS = directly held stocks. BONDS = directly held bonds. RET.ACC = retirement accounts. S.BONDS = savings bonds. LIFE.INS = cash value of whole life insurance. TRUSTS = other managed assets. OTHER.A = other miscellaneous financial assets. VEHIC = vehicles. HOME = primary residence(s). O.HOUSES = residential houses excluding primary residence(s). NON.RES.RE = net equity non-residential real estate. BUSINESS = businesses.

Holding Gold: An Optimal Response to Expropriation?

India has a history of ‘expropriation’⁸ going back to at least the Mogul era (Eraly (2007)). Examples in the post-independence era include bank nationalization, land reforms, the abolition of ‘privy purses’ and the recent demonetization. Holding gold may be a cultural norm that developed as an optimal response to expropriation.

The travelogues of Jean-Baptiste Tavernier and François Bernier provide a detailed description of life in the Mughal court. The Mughals employed the ‘Mansabdari System’. A feature of this system was that the property and title of a mansabdar was confiscated after his death. His widow and children had to start life from scratch. This practice led to perverse incentives and mansabdars became experts in the art of concealing wealth, largely in the form of gold and precious stones.

Until the mid 90s the only viable financial asset that could be used for savings by the vast majority Indians were bank time deposits. As figure 7 clearly illustrates, the nominal returns on these deposits were dominated by returns on gold. So it should come as no surprise that gold features prominently in Indian household portfolios⁹.

Gold holdings in in India are less of an anomaly if one recognizes that internationally too, households indirectly hold gold in the form of ETF’s and other financial assets backed by physical gold. Although the paper characterizes gold as a non-financial asset, it could easily be characterized as a financial asset. I conjecture that substantial gold holdings in the portfolios of households in developed countries are probably classified as financial assets whereas the holdings of Indian households are classified as non-financial assets.

Prescription for Growth

The authors seem to imply that a change in the composition of the portfolio of savings will lead to a higher growth rate.¹⁰ Specifically, reducing the holdings of gold

⁸ This is not a value judgment but a documentation of facts.

⁹ The low correlation with equity returns further enhances its appeal

¹⁰ See their discussion in section1.

and increasing the holdings of financial assets. However, this cannot be addressed without a model linking investment and growth. Perhaps the authors have in mind a Harrod Domar model of the type $g_y = i_y / k_y$ where g_y is the growth rate of output y , i_y the investment as fraction of output (equal to the savings rate s) and k_y the capital output ratio. If the capital output ratio is *assumed to be constant*, then presumably increasing ‘productive’ investment by reducing gold holdings in household portfolios will increase the growth rate. A key feature of ‘neoclassical’ growth models (Solow (1956), Cass (1966) and Koopmans (1965)) is that the steady state growth rate of an economy is independent of the savings rate, and largely dependent on the growth rate of total factor productivity. From the perspective of neoclassical economic theory, gold is a ‘consumption good’, like jewelry. A shift out of gold would represent an increase in the Indian equilibrium savings as a fraction of GDP; however, the long run growth in output per worker will not increase, without improvements in the growth rate of total factor productivity. These improvements are more likely to occur via technological improvements and the modernization of Indian labor laws than through ‘portfolio rebalancing’.

Another complicating factor is that India is transitioning towards an open economy regime. In open economies, as is well known, there is no direct link between domestic savings and investment as investments can be financed by capital inflows.

I think this and other policy recommendations are best in addressed the context of well-specified models. Perhaps the authors should pursue them in a subsequent paper.

References

Bosworth, Barry, Susan M. Collins and Arvind Virmani. Sources of Growth in the Indian Economy; *India Policy Forum* 2006.

Constantinides, George M., John B. Donaldson, and Rajnish Mehra. Junior Can't Borrow: A New Perspective on the Equity Premium Puzzle. *Quarterly Journal of Economics* 118, 2002, pp 269–296.

Davis, Steven J and Rajnish Mehra. Stocks and Bonds in the Portfolio Life-Cycle, *Financial Times* June 4, 2001.

Deaton, A. S. Saving in developing countries: Theory and review. Proceedings of the World Bank Annual Conference on Development Economics 1989; *The World Bank Economic Review*, Washington DC, 1990.

Eraly, Abraham. *The Mughal World: Life in India's Last Golden Age*. Orion Publishing 2007.

Global Wealth Data Handbook. Credit Suisse Research Institute. Credit Suisse AG, Zurich, Switzerland 2014.

Mehra, Rajnish, Facundo Piguillem, and Edward C Prescott. Costly Financial Intermediation in Neoclassical Growth Theory. *Quantitative Economics*, Volume 2, March 2011, pp.1-36.

Ravina, Enrichetta, Luis Viceira and Ingo Walter. The Portfolios and Financial Decisions of High Net Worth U.S. Households; Working paper. 2016.