

We are proud to announce the inaugural issue of the Working Paper Series of the [NSE-NYU Stern Initiative on the Study of Indian Financial Markets](#). Set up in 2012, the Initiative, a product of the collaboration between Stern School of Business, New York University and National Stock Exchange (NSE) of India, aims at creating an environment where the academia and the finance industry complement each other to provide research support for effective policy making. In its first year (2012-13), the Initiative supported six research projects, which were screened from over 50 international submissions received in response to a [Call for Papers](#). These projects and two invited papers were presented at the Initiative's [Annual Conference](#) in Mumbai on July 29-30, 2013. The papers were reviewed before and after the Conference as well as discussed at the Conference by independent referees. The resulting set of papers constitute this inaugural issue.

The next Annual Conference (2013-14 Conference Agenda) of the Initiative will be held in Mumbai on August 4-5, 2014, and will feature seven supported research projects, again screened from international submissions received in response to a [Call for Papers](#), as well as two invited papers (on Banking Reforms and Infrastructure Finance in India).

Below is a brief summary of the papers in the inaugural series. We hope you find the papers interesting and stimulating in terms of enriching your understanding of Indian financial markets as well as providing food for thought for further research.

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### **Brief Summary of Papers in the Inaugural NSE - NYU Stern Working Paper Series on the Study of Indian Financial Markets**

The two invited papers “Foreign Fund Flows and Stock Returns: Evidence from India” (by Viral V Acharya, V Ravi Anshuman and Kiran Kumar) and “Liquidity Provision and Market Fragility” (by Mila Getmansky, Ravi Jagannathan, Lorian Pelizzon and Ernst Schaumburg) independently highlight that there are significant limits to liquidity provision capacity in the Indian stock market trading.

Acharya et al. analyze data on foreign institutional investor (FII) buys and sales at individual stock level during 2006-11 to show that while stocks experiencing FII buying that is abnormal (relative to a predictive model of FII flows) witness price rise that is entirely permanent, those experiencing abnormal FII selling witness price declines that are partly permanent and partly transient, reversing within two weeks. These price patterns are unrelated to firm characteristics and stock risk loadings, and most evident during periods of global market stress. The price declines upon FII selling “pressure” that reverse only slowly are reflective of limited depth in the domestic investors for providing liquidity in such times. The permanent

price rises upon FII buying, on the other hand, likely reflect information revelation through such trades. While the price declines contribute to daily stock price volatility in a significant measure, FII trading provides a valuable information revelation role. (For details see: [“Foreign Fund Flows and Stock Returns: Evidence from India”](#).)

Getmansky et al. focus on a micro-structure level analysis of orders and trades in the shares of a single actively traded firm on the NSE from April to June 2006. During normal times, they find that short-term traders who carried little or no inventories overnight provide liquidity (a) by taking the side of the market against price movements and (b) through *hot potato trading* (amongst each other) primarily to manage their inventory risk. Importantly, however, during the two “fast crash” days in the sample they study, their liquidity provision was inadequate to meet the liquidity needs of the market resulting from abnormal FII selling; only buying by domestic mutual funds led to ultimate price recoveries. (For details see: [“Liquidity Provision and Market Fragility”](#))

Interestingly, the findings of Getmansky et al. provide a possible micro-foundation for the aggregate level FII price “pressure” from sales documented in Acharya et al. paper. Given that both papers were independently conducted, similar economic conclusion of both papers is reassuring, notwithstanding the fact that the Getmansky et al. paper is based on data for a relatively short period and only a single stock. Further, results of both papers suggest that greater investment in developing a deeper pool of domestic liquidity providers in the Indian stock market could lead to substantial benefits as such depth would reduce market fragility during “crash” episodes and in turn dampen stock market volatility.

Another paper in the series, “Low Latency Trading and the Comovement of Order Flow, Prices, and Market Conditions” (by Ekkehart Boehmer and R L Shankar), too suggests that having more diverse market players with direct access to trading platforms likely stabilizes the market. Boehmer and Shankar study in particular the impact of algorithmic trading on commonality, i.e., co-movement in order flows, returns, liquidity and volatility. To do so, they use order-level data from the NSE around the introduction of collocation facility that allowed market participants to rent servers within NSE premises. Exploiting trading and return patterns before and after this natural experiment, the authors find that algorithmic trading *reduces* commonality. The authors attribute the reduction to more intense competition among algorithmic traders than non-algorithmic traders. (For details see: [“Low Latency Trading and the Comovement of Order Flow, Prices, and Market Conditions”](#))

The next two papers in the series concern important institutional aspects of listing and trading in the Indian stock markets. “Anchor Investors in IPOs” (by Amit Bubna and Nagpuranand Prabhala) studies the role played by anchor investors in the IPO process. In July 2009, the Securities and Exchange Board of India (SEBI) came out with a ruling that underwriters can allot shares in the IPO pre-market to designated

“anchors” (who are qualified institutional buyers), subject to the “sunshine” requirement that underwriters must publicly disclose the anchors’ identity, the (discretionary) share allocation to them and the offer price. How did it impact the market? Authors find that anchors influence the bidding by other institutional investors, especially in hard-to-price issues, due to the transparency requirement. Also, anchor IPOs are associated with better long-term performance and lower volatility. Since the bidding influence occurs due to the transparency requirements of the book building process, authors conclude that *how* book-building is used appears to be at least as important as *whether* book-building is used. Given long-standing concerns about opacity in the book-building process around the world including in the United States, this Indian experiment with transparency holds promise for improving IPOs. ([For details see: “Anchor Investors in IPOs”](#))

“Do Indian Business Group Owned Mutual Funds Maximize Value for their Investors?” (by Pulak Ghosh, Jayant R Kale and Venkatesh Panchapagesan) asks the policy question of whether there is potential inefficiency due to conflicts of interest in having business groups run mutual funds that are allowed to invest in own business group firms. The authors apply a clever technique of comparing return and the portfolio holdings of business group mutual funds in own business group firms and in the rivals of its group firms that operate in the same industries to that of a typical mutual fund (i.e., a fund not associated with any business group). Authors find that regardless of whether holdings in own group firms or in the rivals of its group firms are greater or lower than the benchmark investment made by the typical mutual fund, the effect is one of under-performance by the business group mutual fund. The effect, however, is stronger for underinvestment. These findings may be relevant for the recent discussion on allowing business groups to own banks. (For details see: [“Do Indian Business Group Owned Mutual Funds Maximize Value for their Investors?”](#))

The last two papers concern corporate finance of Indian firms. “Pricing of International 144A Debt: Evidence from the US Secondary Bond Market: (by Alan Huang, Madhu Kalimipalli, Subhankar Nayak and Latha Ramachand) provides a study of the secondary market pricing of privately placed 144A debt issues in the US market, including by Indian firms, during the 1994-2010 period. The authors find that overall 144A transaction spreads are significantly higher for foreign and emerging market issuers compared to three different control samples (namely, Yankee debt issuers, US 144A issuers and US public debt issuers) which can be attributed to illiquidity, default, governance and familiarity risks. There is however a significant yield spread discount in secondary market for Indian issuers as compared to other 144A issuers, which the authors attribute to favorable liquidity and credit risk of the Indian issuing firms. Their findings help understand the growing preference of Indian firms to rely on such external commercial borrowings, a dependence that has been anecdotally observed to transmit foreign market shocks to the Indian corporate sector, and in turn, the Indian financial sector. (For details see: [“Pricing of International 144A Debt: Evidence from the US Secondary Bond Market”](#))

“Dividend Tax Effects – Evidence from India” (by Shobhit Aggarwal) also exploits a rule change, in particular the 2002 change in dividend tax law in India which impacted the retail investors more favorably than other investors. The rule change implied that the net post-tax returns to retail investors would be higher than that to other investors for dividend paying stocks. Against this backdrop, the authors attempted to examine (a) whether the retail investors factor in the dividend taxes while taking investment decisions, and (b) whether firms change their dividend policies to suit the altered tax incentives of retail investors. Using the share of retail investors in a firm to indicate their preference to hold stocks of that firm relative to other investors’ preference, the paper finds evidence that retail investors do factor in taxes while taking investment decisions--as some of the finance theories suggest--in that they rebalance their portfolios towards high dividend-yielding stocks to take advantage of their favorable tax status. Curiously, firms’ dividend policies remain unaltered, that is, firm managers do not change their dividend policy to align it with the altered tax incentives of their retail investors. (For details see: [“Dividend Tax Effects – Evidence from India”](#))