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A NEWSLETTER OF THE FINANCE LAB

September 2015, Volume 3, Issue 1





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A NEWSLETTER OF THE FINANCE LAB



Indian Institute of Management Calcutta

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GUEST COLUMN: Direct Recapitalisation of PSU Banks may not always be the Best Option for Government of India

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Editorial

August 2015 was a proud month for Bandhan Bank when it started its operation as a full-fledged bank with more than 500 branches across the country. Bandhan is the first Micro finance Institute to become a fully-operational bank. Incidentally, SKS Microfinance did not get requisite RBI license for setting up a bank. RBI, in the same month, has also granted in-principle approval to 11 applicants to set up payments banks in India. One of the principal objectives of a payments bank is to offer financial services to the excluded segments of the population namely, small business, unorganized sector, low income households etc. The recent growth of electronic wallet has taken established banks by surprise. The payments banks will further give tough competition to the way traditional banking is conducted. So, it is interesting time for the Indian banking industry.

The first issue of Volume 3 of *aṛṭha* has four articles. The first piece shows that effect of any news on the market depends on the attention of investors. The article finds that non-market attention-grabbing events mute market reaction. The second piece looks at the impact of Payments Banks and Small Banks. The author raises a question - Are the payments banks really going to threaten the existence of large retail banking by the leading commercial banks? The third piece examines the existing risk management practices and other effective ways of controlling the impact of price volatility in Commodity market. The fourth piece deals with PSU Banks and their NPA burden. In this article, the author proposes a new framework for the Asset Management Company, Sovereign Distressed Asset Fund (SDAF).

You may send your comments and feedback on this issue to ashok@iimcal.ac.in

Happy reading!

Ashok Banerjee

Attention Please!

Ashok Banerjee

Kamran Quddus*



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It is customary for companies to announce major corporate actions after the markets close so that traders cannot immediately take advantage (overreact) of that information and in the process get enough time to fathom the sentiments contained in the news. Literature in behavioural finance provide ample evidence of underreaction /overreaction of investors to news challenging the foundations of efficient market hypothesis. Generally people underreact to ‘positive’ news and overreact to ‘negative news’. The momentum trading strategy believes in underreaction of investors. In order to avoid immediate (over/under) reaction of investors to company-specific news, corporates make major announcements after market hours. Researchers, therefore, look at the reaction of the investors to the news by measuring overnight returns of stocks. If news carries positive (negative) sentiment, overnight returns should be positive (negative).

Research, at Finance Lab of IIM Calcutta, shows that effect of any news on the market depends on the attention of investors. If attention of investors were somewhere else, even news carrying strong positive/negative sentiment would go unnoticed or would be penalized. This is particularly true in case of major non-market attention grabbing events. In other words, attention overwhelms the effect of sentiment. We have mentioned in a recent article in the Economic Times¹ that ‘processing any attention-grabbing event requires effort. If that effort is directed toward particular information, people are lazy enough to extra effort to process any other information at the same time no matter how much sentiment that information might carry.’ One explanation for such an attitude when attention is divided is that the two sources of information vie for limited attentional

¹ Your Undivided Attention, The Economic Times, 14 September 2015

*FP Student, IIM Calcutta

resources, which are sometimes described as “mental effort.”² When tasks are easier, less demand is made on this limited resource. Financial news demand more mental efforts and hence requires undivided attention. There are a few empirical researches that have looked at this phenomenon. For example, a study³ finds that a loss in the World Cup elimination stage leads to a next-day abnormal stock return of -49 basis points. This loss effect is stronger in small stocks and in more important games, and is robust to methodological changes. The study has also found similar results with other sports.

Sentiment analysis, which involves mechanical extraction of sentiment score, alleviate this problem partially by offering the sentiment output without much efforts on the part of the ‘reader’. Therefore, news analysts claim that advanced language-processing techniques would generate sentiment score on any news item at a ‘lightening’ speed and hence traders’ attention required to process such news would be a fraction of what would have otherwise required for a human reading of news. However, the field of sentiment analysis is still evolving and presently faces many challenges.

Therefore, if any corporate has some good news to share, it needs to check whether the investors’ attention is somewhere else. If any non-market event diverts the attention of the investors from the market, companies should wait before releasing any ‘good’ news. Our results show that companies should revisit their present practice of timing the market release after market hours. They should also consider an additional factor- the attention of investors. On the other hand, if a company has to reveal ‘bad’ news, it should conveniently do so when investors attention is somewhere else.

Data and Methodology

We use Factiva to search company specific news for a small sample of six companies considered for this pilot study. Factiva is a news database offered by Dow Jones that aggregates information using a plethora of news sources. To limit the number of news searches and maintain homogeneity we restrict our sources to BSE Company Announcements, NewsWire 18 and Reuters only. We perform individual searches for all companies in our sample for each event window. We take care of repetitions of the news from different sources by excluding the multiple occurrences of the same news and take only that news that occurs first on any of the included sources. Researchers have

² Ibid

³ ALEX EDMANS, DIEGO GARCÍA, and ØYVIND NORLI, Sports Sentiment and Stock Returns, Journal of Finance, VOL. LXII, NO. 4 • AUGUST 2007

widely discussed the wide coverage of large size companies and relatively less coverage for smaller companies. To take care of this issue, we include identical number of companies across all size groups. This normalizes any variation of news flow attributable to size. We perform a free text search that looks for company name in the headline and the leading paragraph in the selected window. For the non-market events, we conduct a simple web-search to gather all non-market news that have been making headlines for the years 2010 through 2014 in India. A complete list of all company specific announcements in different windows as well as non-market events selected has been enumerated in the Appendix A.

We hypothesize that a major non-market event distracts individual investors at least temporarily, if not for long. During these event windows, any company specific event goes largely unnoticed and has a muted impact than it would have had otherwise. Hence negative news is expected to lead to a lesser erosion in market capitalization and similarly positive news will see a smaller or no addition to stock prices.

For every company in our sample, we examine the abnormal returns generated using market model for a period when investors were preoccupied with a non-market event and call it R_{inside} . Similarly we generate abnormal returns for an analogous window when there was no such distraction and call it $R_{outside}$. We cumulate the abnormal returns for each company inside and outside the attention period and call it CAR_{inside} and $CAR_{outside}$ respectively. Finally we generate the CAR_{diff} series as the difference between outside period and inside period cumulative average return.

We check the statistical significance of the CAR_{diff} series and perform a two-tailed t test to check whether the difference series is different from zero.

We calculate cumulative abnormal returns for different windows around the company announcement date. Following event study methodology, we use the estimation window data to generate the parameter estimates. We use a uniform window of 110 trading days across all events and exclude a period of 10 trading days before the occurrence of the event. We use a single index model for estimation of parameters.

$$R_{i,t} = \alpha_{i,t} + \beta_{i,t} R_{m,t} \quad (1)$$

$R_{i,t}$ denotes the return on stock i ($i=1,2,\dots,6$) for estimation period t ($t=1,2,\dots,5$) and $R_{m,t}$ denotes the market return for estimation period t respectively. We use the return on S&P CNX Nifty to

proxy for market return. Using the parameters estimated using equation (1), we compute company specific returns in the event window. We calculate the abnormal return AR_{it} as the excess company returns over the market return.

$$AR_{it} = R_{it} - \hat{\alpha}_{i,t} - \hat{\beta}_{i,t} R_{m,t} \quad (2)$$

The market adjusted excess return is then aggregated over different windows to calculate cumulative abnormal returns for each of the companies.

$$CAR_{it} = \sum_{t=t_1}^{t_2} AR_{it} \quad (3)$$

Results

Our results (Table 1) suggest our null hypothesis is rejected at 99% level of significance in all but one case. This supports our hypothesis that any company specific announcement, good or bad is likely to have a muted impact on stock performance in the non-market event window, when a majority of investors are inattentive.

Table 1			
T-test of difference of means			
H₀: CAR_{diff} = 0			
H_a: CAR_{diff} ≠ 0			
Company Name	Mean¹	t	Pr(T > t)
Coal India	0.0068	2.8685	0.0089***
Infosys	-0.0190	-9.3022	0.0000***
Motherson Sumi	0.0094	-3.1354	0.0048***
Oracle Financial Services	-0.0024	-0.6853	0.5003
Fortis Healthcare	-0.0366	-8.0007	0.0000***
Hexaware	0.0677	8.2550	0.0000***

Note:

¹ Mean refers to the difference between outside attention period returns and attention period cumulative average returns

*** Significant at 1% level of significance

Cumulative average return figures (Table 2) clearly highlight our point. A positive news for Coal India generates a return of only 0.83% in the (-2, 0) window during the attention period, whereas a similar positive news generates a return of 2.42% outside the attention period. A negative news for Fortis Healthcare leads to -0.97% in the (-2, +1) window during the attention period, whereas a similar negative news generates a return of -1.06% outside the attention period. Thus positive news witness lesser gains and negative news see lesser losses during distraction periods. The results are robust across all event windows and across all size groups and the differences in cumulative average returns are found to be significant.

Table 2						
a. Summary Statistics (Attention Period)						
Average CAR						
Window	Coal India	Infosys	Motherson Sumi	Oracle Financial Services	Fortis Healthcare	Hexaware
(-2, 0)	0.83%	-0.22%	0.89%	0.57%	-0.71%	3.16%
(-2,+1)	0.04%	0.81%	3.80%	0.22%	-0.97%	1.11%
(-2,+2)	-0.20%	1.97%	4.17%	-1.40%	1.08%	0.31%
(-2,+3)	0.04%	2.49%	3.81%	-0.85%	3.03%	4.38%
(-1, 0)	0.66%	-0.08%	-0.67%	-1.77%	0.35%	3.48%
(-1,+1)	-0.13%	0.96%	2.24%	-2.12%	0.08%	1.42%
(-1,+2)	-0.37%	2.11%	2.62%	-3.74%	2.14%	0.62%
(-1,+3)	-0.13%	2.64%	2.26%	-3.19%	4.09%	4.69%
(0,+1)	0.40%	1.06%	2.37%	-2.10%	-0.09%	0.59%
(0,+2)	0.59%	2.21%	2.74%	-3.72%	1.96%	-0.21%
(0,+3)	0.37%	2.73%	2.39%	-3.17%	3.92%	3.86%
b. Summary Statistics (Outside Attention Period)						
Average CAR						
Window	Coal India	Infosys	Motherson Sumi	Oracle Financial Services	Fortis Healthcare	Hexaware
(-2, 0)	2.42%	-0.64%	2.47%	-2.33%	-0.23%	4.07%

(-2,+1)	1.97%	-0.88%	3.53%	-1.02%	-1.06%	4.63%
(-2,+2)	1.57%	-1.01%	2.66%	-1.47%	-0.71%	5.66%
(-2,+3)	2.49%	-1.42%	4.33%	-2.48%	-0.67%	8.29%
(-1, 0)	1.20%	0.02%	-0.97%	-2.17%	-0.64%	3.51%
(-1,+1)	0.75%	-0.21%	0.09%	-0.86%	-1.48%	4.07%
(-1,+2)	0.35%	-0.35%	-0.78%	-1.31%	-1.13%	5.09%
(-1,+3)	1.27%	-0.76%	0.88%	-2.32%	-1.09%	7.72%
(0,+1)	0.11%	-0.53%	-0.18%	-0.36%	-0.31%	6.31%
(0,+2)	-0.29%	-0.67%	-1.05%	-0.81%	0.04%	5.64%
(0,+3)	0.63%	-1.08%	0.62%	-1.82%	0.07%	5.59%

We must mention here that above results should be considered with caution- we have used only five non-market events and seen their impact on six companies. This is a pilot study and we have already undertaken a detailed study using larger sample and more number of events. We propose to share the results with you once the same is ready. However, initial findings are encouraging and provide support to our hypothesis that non-market attention-grabbing events mute market reaction.

Appendix

List of Non-market events selected			
	Date	Non- Market Event	
1	05-Apr-11	Anna Hazare fast for Jan Lokpal Bill	
2	13-Jul-11	Mumbai Bombings	
3	07-Sep-11	Pune Bombings	
4	27-May-12	IPL 5	
5	01-Aug-12	Pune Bombings	
Table III: List of Company specific announcements			
Event	Company	Attention Period	Company Announcement
1	Coal India	No	Coal India arms may be listed over next 5 years
		Yes	Coal India given 'maharatna' status; Neyveli Lignite now 'navratna'

2		No	Source says Coal India may buy majority stake in Australia mine	
		Yes	Mahanadi Coalfields invites bid for setting up 1,600MW power plant	
3		No	Coal India in talks to buy Indonesia mine	
		Yes	Coal India Readies.42,000-Cr Investment	
4		No	Eastern state halts operations at six Coal India mines	
		Yes	Coal India to invest \$14.6 bln to raise output in 5 yrs	
5		No	Coal India aims to double South Eastern Coalfield output in 5-6 yrs	
		Yes	15 Coal India mines may get conditional green ministry nod	
1		Infosys	No	Infosys BPO's US arm gets multiyear order from Canada's FaithLife
			Yes	Officials reportedly in talks to have Infosys set up local presence
2	No		India's Infosys eyes buys in Europe, Japan, and healthcare sector	
	Yes		Zuno Bank implements solution from Infosys	
3	No		Infosys BPO's US arm gets multiyear order from Canada's FaithLife	
	Yes		Infosys In Talks To Acquire US IT Company For \$500-\$750 Million	
4	No		India's Infosys, UK's Fabric win 'large' GSK order	
	Yes		Karnataka clears Infosys' IT/ITES SEZ project	
5	No		Infosys Signs Multi-Year Agreement for Business Transformation Project With Ministry of Corporate Affairs	
	Yes		Harley-Davidson awards IT outsourcing deal to Infosys	
1	Motherson Sumi	No	Motherson group to buy 80% in Germany's auto part co Peguform	
		Yes	Delhi HC Approves Merger of Subsidiaries with Motherson Sumi	
2		No	Delhi HC OKs Motherson Sumi System's arms merger with co	
		Yes	Motherson group to buy 80% in Germany's auto part co Peguform	
3		No	Motherson Sumi to mull overseas buy opportunity	
		Yes	Motherson Sumi secured approval of its board for the merger of its subsidiary Sumi Motherson Innovative Eng	
1	Oracle Financial Services Software	No	Oracle Financial Svcs gets IT contract from Tanzania's Amana Bank	
		Yes	Bank of the Lao selects Oracle FLEXCUBE Universal Banking to Modernize Operations	
2		No	Helm Bank Selects Oracle	
		Yes	Oracle Financial Svcs gets IT contract from Tanzania's Amana Bank	

3		No	Oracle Introduces Oracle FLEXCUBE 12.0 to Help Banks Meet the Needs of Gen Y Customers
		Yes	Oracle Plc mulls delisting plans for India arm
1	Fortis Healthcare	No	Fortis Global Health to invest A\$100 mln in Australia's Dental Corp
		Yes	India's Fortis Buying Way Into Asia-Pacific Health Care Market
4		No	Fortis Healthcare arm buys 85% in Singapore co for S\$62.9 mln
		Yes	Fortis in talks over control of Wockhardt Hospitals
5		No	Fortis to get Rs. 3700 Mn Equity infusion in SRL
		Yes	Participation in tender process by Government of the Hong Kong Special Administrative Region
1	Hexaware Technologies	No	Hexaware Signs its largest deal to-date Potential revenue worth \$ 177m over five years
		Yes	Hexaware wins multi-million dollar deal
2		No	Hexaware promoter Elder Venture to up stake in co to 10.13%
		Yes	Hexaware Signs its largest deal to-date Potential revenue worth \$ 177m over five years

Payments Banks and Small Banks: New Kids in the Indian Financial Landscape

Partha Ray



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Payments banks and small banks (also called small finance banks) are in headlines of the pink newspapers these days. Ever since August 19, 2015 when the RBI issued licenses to 11 entities to establish payments banks, speculation is ripe as to whether this would usher in a new era of Indian banking. More recently, in-principle licenses were issued to 10 microfinance entities and one non-bank financial company on September 16. Questions are also raised whether this would lead to end of mass banking by commercial banks in India – and that includes both public as well as private sector banks. Are low and middle income households going to withdraw their accounts from leading commercial banks and move to these payments banks? All such questions are blowing in the wind.

Backdrop

To begin with it may be useful to recount the backdrop. The idea of smaller and differentiated banks has been mooted in the Indian financial sector landscape for quite some time. The Report of the Committee on Financial Sector Reforms in 2009 (Chairman: Raghuram Rajan; appointed by the Government of India) delved the idea that the Indian economy needs to have more small finance banks with “the ability to provide both asset and liability products to their clients.” While the rationale for these banks would be to increase financial inclusion by reaching out to “poorer households and local small and medium enterprises”, the Committee expected that these banks could also be “an important entry point into the banking system from which some banks could grow into large banks”. Rajan Committee suggested the following features of such small finance banks:

- These banks should have the freedom to decide their future growth path.

- Initially their license could be restricted to a certain maximum number of branches and asset size;
- These banks would provide a comprehensive menu of financial services (credit, savings, insurance, remittances, and investments).
- Interest rates on loans extended by these banks would be deregulated, as is the case for Local Area Banks (LABs).
- These banks would require greater monitoring in the beginning.
- The government should encourage the creation of low cost technological platforms that can be offered widely to such small banks.

Subsequently, on August 27, 2013, the RBI released a policy discussion paper on “Banking Structure in India – The Way Forward”. The discussion paper categorically pointed out that there is a need for niche banking in India, and differentiated licensing could be a desirable step in this direction.

The idea of a payments bank got formal shape in the report of the RBI-appointed “Committee on Comprehensive Financial Services for Small Businesses and Low-Income Households” (Chairman: Nachiket Mor) that submitted its report on January 7, 2014. The Mor Committee report categorically specified the following characteristics of a payments bank:

- They will be restricted to holding a maximum balance of Rs. 50,000 per customer.
- They will be required to meet the CRR requirements applicable to all the Scheduled Commercial Banks.
- They will be required to deposit the balance proceeds in approved SLR securities with a duration of no more than three months and will not be permitted to assume any kind of credit risks.
- The minimum entry capital requirement for them will be Rs. 50 crore compared to the Rs. 500 crore required for full-service SCBs.
- Existing Scheduled Commercial Banks should be permitted to create a Payments Bank as a subsidiary.

Subsequently, in the Union Budget 2014-15 presented on July 10, 2014, it was announced that:

“After making suitable changes to current framework, a structure will be put in place for continuous authorization of universal banks in the private sector in the current financial year. RBI will create a framework for licensing small banks and other differentiated banks. Differentiated banks serving niche interests, local area banks, payment banks etc. are

contemplated to meet credit and remittance needs of small businesses, unorganized sector, low income households, farmers and migrant work force”.

Guidelines

Accordingly, on November 27, 2014 the RBI released the guidelines of the Payments Banks. It may be useful to have a quick account of these guidelines.

- **Objectives:** The objectives of setting up of payments banks will be to further financial inclusion by providing “(i) small savings accounts and (ii) payments/remittance services to migrant labour workforce, low income households, small businesses, other unorganized sector entities and other users”.
- **Eligible promoters:** “Existing non-bank Pre-paid Payment Instrument (PPI) issuers; and other entities such as individuals / professionals; Non-Banking Finance Companies (NBFCs), corporate Business Correspondents (BCs), mobile telephone companies, super-market chains, companies, real sector cooperatives; that are owned and controlled by residents; and public sector entities are eligible”. A promoter can have a joint venture with an existing scheduled commercial bank to set up a payments bank.
- **Scope of activities:** These payment banks can undertake the following activities: (a) acceptance of demand deposits (subject to a maximum balance of Rs. 1 lakh per individual customer); (b) issuance of ATM/debit cards (but no credit cards); (c) payments and remittance services; (c) business correspondents of another bank; and (d) distribution of non-risk sharing simple financial products (like mutual fund units and insurance products).
- **Deployment of funds:** While the payments bank cannot undertake lending activities, apart from amounts maintained as Cash Reserve Ratio (CRR) with the RBI, it will be required to invest minimum 75 per cent of its "demand deposit balances" in Statutory Liquidity Ratio (SLR) eligible Government securities/treasury bills with maturity up to one year. They can hold maximum 25 per cent in deposits with other commercial banks.
- **Capital requirement:** While the minimum paid-up equity capital for payments banks shall be Rs. 100 crore, these should have a leverage ratio of not less than 3 per cent, i.e., its outside liabilities should not exceed 33.33 times its net worth (paid-up capital and reserves).

As far as the ownership of these payment banks are concerned, the promoter's minimum initial contribution to the paid-up equity capital of such payments bank shall at least be 40 per cent for the

first five years. The foreign shareholding in the payments bank would be as per the Foreign Direct Investment (FDI) policy for private sector banks.

It was indicated that an External Advisory Committee (EAC) comprising eminent professionals will evaluate the applications for establishment of these payments banks. Subsequently, an External Advisory Committee for Payments Banks was formed on February 4, 2015 by the RBI with Nachiket Mor as its Chairman and Roopa Kudva, Shubhalakshmi Panse, and Deepak Phatak as its members.

At the same time the RBI has also issued guidelines for setting up of “small finance banks” for furthering financial inclusion by (a) provision of savings vehicles, and (ii) supply of credit to the SMR sector. While the thrust of the payment banks are to provide payment solutions, small finance banks are expected to provide full banking solution for small borrowers and depositors.

Recent Developments

The Reserve Bank received 41 applications for payments banks. So far, 11 applicants have been granted in-principle approval to set up payments banks. These include diverse entities like Aditya Birla Nuvo; Airtel M Commerce Services; Cholamandalam Distribution Services (a subsidiary of Chennai-based Cholamandalam Investment and Finance Company); Department of Posts; Fino PayTech; National Securities Depository; Reliance Industries; Dilip Shanghvi (owner of Sun Pharma); Vijay Shekhar Sharma (founder of Paytm, a mobile payments start-up backed by Chinese e-commerce group Alibaba); Tech Mahindra; and Vodafone m-pesa. While many of them like Aditya Birla Nuvo or Cholamandalam Distribution Services are already in the business of financial services, some like Fino PayTech is the business and banking technology platform provider which operates India’s largest network of business correspondent.

On the other hand, while the RBI had received 72 applications for small finance banks, based on the recommendation of the Expert Committee (constituted for this purpose)⁴, eleven institutions were given the in-principle license on September 16, 2015.⁵ The “in-principle” approval granted will be

⁴ The external advisory committee for small finance banks had Usha Thorat as its Chairperson, and M.S. Sahoo, M.S. Sriram, M Balachandran as its members.

⁵ Names of selected applicants are as follows: Au Financiers (India) Ltd., Jaipur; Capital Local Area Bank Ltd., Jalandhar; Disha Microfin Private Ltd., Ahmedabad; Equitas Holdings P Limited, Chennai; ESAF Microfinance and Investments Private Ltd., Chennai; Janalakshmi Financial Services Private Limited, Bengaluru; RGVN

valid for 18 months to enable the applicants to comply with the requirements under the Guidelines and fulfill other conditions as may be stipulated by the RBI.

The U.S Model

Is the idea of these proposed small banks mimicking the banking structure prevalent in the US economy, where small banks (which typically fund their activities with customers' deposits) play a crucial role and have emerged as key providers of small business loans, mortgages, and agricultural loans? The idea in the U.S is simple: small banks have local presence and knowledge whereby they will have information about borrowers that larger banks generally do not have. Consequently, these small banks may be able to make loans to borrowers who may not be qualified to get loans from larger banks. A simple statistic would illustrate the extent of presence of small banks in the U.S economy. As against around 100 large banks, number of small banks in the U.S was about 6000 (collecting about 1/5th of aggregate domestic bank deposits) at the end of 2014. It also needs to be noted that such small banks took a huge hit during the financial crisis of 2008 – 2009 and the number of small banks (with \$10 billion or less in assets) has declined 27 percent, from 8,263 in Q1 2000 to 5,961 in Q4 2014.

Some unanswered Questions

Is this notion of payments banks in India new? In this context, it may be useful to remind ourselves that the Report of the Committee on Capital Account Convertibility (Chairman: Shri S S Tarapore) in 1997 put forth the view that "... the weak banks should be converted into what are called 'narrow banks'; the incremental resources of these banks should be restricted only to investments in Government securities..." (pp. 65). Are the payments banks then reincarnations of the narrow banks under a financial inclusion garb?

Some of joint ventures related to payments banks have also attracted attention. Illustratively, Reliance Industries (RIL), has entered into a partnership with State Bank of India for a payments bank. While RIL is the promoter, the SBI will be the joint venture partner with equity investment of 30 per cent. Does this mean the end of the earlier regime whereby industrial houses were discouraged to own banks?

(North East) Microfinance Limited, Guwahati; Suryoday Micro Finance Private Ltd., Navi Mumbai; Ujjivan Financial Services Private Ltd., Bengaluru; Utkarsh Micro Finance Private Ltd., Varanasi

Also when an entity is found non-eligible for a full-service bank, on what basis they are found to be eligible as a payments bank? A case in point is the instance of Aditya Birla group who was not given a universal bank license but did get a payments bank license.

Finally, with payments banks and small finance banks around, will there be flight of retail deposits from bigger commercial banks to these banks? Are the payments banks really going to threaten the existence of large retail banking by the leading commercial banks?

While these questions still remain unanswered, going forward these important issues could shape the contour of Indian financial sector.

Risk Management in Commodity Market

Vivek Rajvanshi

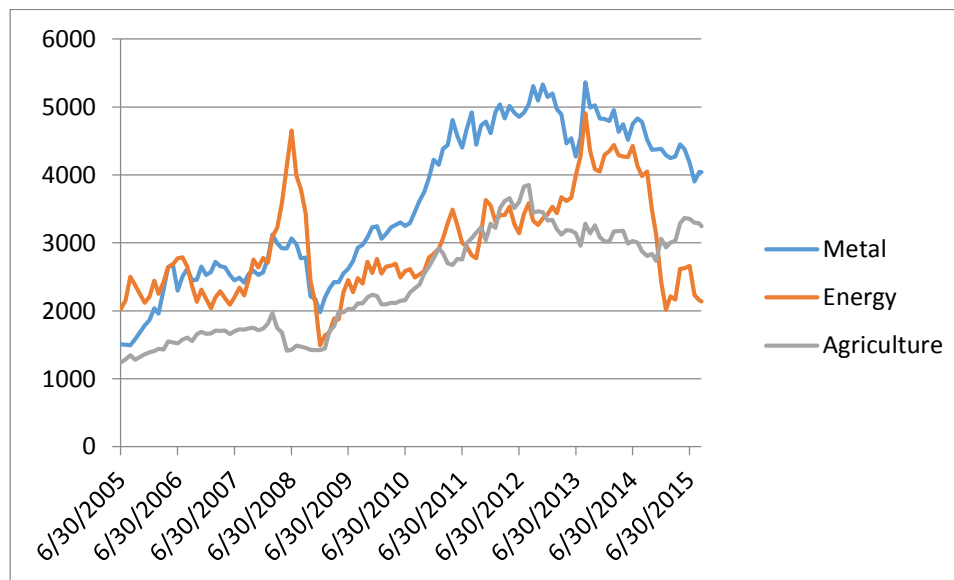


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Commodities play an important role in our societies, as it provides livelihood to individuals, income from exports to nations and is used as raw materials for many industries. Volatile price of commodities not only impact the individuals and processors but have severe negative impact on the economy and create obstacles to development as well. Excess volatility increase uncertainty and therefore induces additional risk for investors. Therefore, every nation has its own risk management system in place to control the prices of the commodities.

Figure below shows the price movements from 2005 to 2015 for metal, energy and agriculture sector index based on the spot prices of basket of commodities covering these sectors. MCX, a leading commodity exchange in India, started dissemination of metal, energy and agriculture sector indices in India from 2005.

Figure 1: Price movement in Metal, Energy and Agriculture Index



It is evident from the figure that in the last decade price volatility was quite high, as there were periods of high rise and fall in all sectors. For example, energy sector index rose from a level of 2200 to a level of around 4400 in just one year from June 2007 to June 2008, and then came down to around a level of 1600 within a year. In 2013 energy index touched a level of 5000, and drastically come down to a level of 2000 in 2015. Metal sector was also volatile, but mostly the prices were in rising phase till 2013 and increased from a level of 1500 (2005) to a level of 5100 (2013), and after that there is almost a continuous fall in metal prices. Agriculture sector index, as compared to metal sector and energy sector has not shown that much aggressive movement in prices. However there is a growing concern of continuous rise in agricultural commodity prices. Since 2005 the agriculture sector index has increased from a level of 1000 to a level of 3000.

To get more idea about the volatility of specific commodities, annualized volatility for aluminum, copper, crude oil and gold for the last five years, i.e. from 2011 to 2015 is shown in the Table below.

Table 1: Annualized Realized Volatility in Selected Commodities

Annualized Volatility				
Commodity	year	max	min	Mean
ALUMINIUM	2011	22.09	9.61	19.43
ALUMINIUM	2012	22.31	9.18	13.81
ALUMINIUM	2013	36.46	11.36	18.93
ALUMINIUM	2014	23.41	11.69	17.45
ALUMINIUM	2015	24.62	11.15	17.04
COPPER	2011	43.31	17.09	28.65
COPPER	2012	20.72	9.27	15.02
COPPER	2013	34.64	8.44	18.53
COPPER	2014	21.32	7.18	15.48
COPPER	2015	33.20	15.38	22.85
CRUDEOIL	2011	29.36	20.90	24.49
CRUDEOIL	2012	30.46	11.74	20.75
CRUDEOIL	2013	43.82	7.22	20.97
CRUDEOIL	2014	44.92	11.98	20.29
CRUDEOIL	2015	60.86	27.88	41.77
GOLD	2011	17.85	12.96	15.38
GOLD	2012	17.93	6.36	11.02
GOLD	2013	42.12	6.82	20.21
GOLD	2014	21.99	9.21	14.63
GOLD	2015	21.06	8.88	13.60

It is not surprising, given the price movements in metal, energy and agriculture sectors that the volatility in the last five years was very high in crude oil market. Average volatility of aluminum and gold were between 11% and 20% during 2011-2015, while for crude oil, volatility in the year 2015 touched a maximum level of 61%. It is clear that the last five years were full of uncertainty for metals and crude oil.

Impact of Volatility

There is a three fold effect of volatility. First, if there is an abnormal rise (fall) in prices of exporting (importing) commodities then it directly impacts the national income, disturbs the balance of payment and in turn the foreign exchange. Second, if the unexpected rise (fall) of commodities cannot be passed on to the consumers then it is difficult for the industries to maintain their revenues and profitability which hampers the growth of its business. Third, rise in price of essential commodities (agricultural commodities in particular) disturbs the budget of households and directly impacts the living standards of the individuals. On the other hand if prices in those commodities fall then it directly impacts the farmer's income and ultimately on their livelihood.

Risk Management Practices and Road Ahead

Given the fact that price volatility impact individual, industrialists and nations, it is important to understand the existing risk management practices and other effective ways of controlling the impact of price volatility.

In general, global commodity prices and exchange rates play an important role in deciding the domestic price of commodities. For some commodities such as crude oil, metals have stronger impact as compared to the agricultural commodities. It also depends upon, whether the country is an exporter/importer of that commodity. India is a major importer of crude oil as it imports around 80% of its requirement of crude oil, while for the metals, situation is mixed. In agriculture sectors we export tea, coffee, dry fruits, sugar, etc. and import edible oil etc.. Therefore, rise in price of one commodity and fall in another will not have a unidirectional impact on the Indian economy, and will

have diversified impact on the overall portfolio. Price rise/fall in agricultural commodities is important as it has severe impact on individuals and farmers.

In short, we may argue that volatility in crude oil prices have severe impact on Indian economy. Therefore, sound fiscal and monetary policy management is important for the stability of the crude oil prices. Metals are used as raw material in several industries. Access to international markets for hedging instruments provides an opportunity for risk management. Hedging the risk of adverse movement in prices of some commodities is possible and helps to smoothen the revenues/expenditures. But only sophisticated participants, such as processors, exporters/importers and government have access to these markets, as small or medium size exporters/importers, industrialists do not have enough skillsets and resources to participate in the international markets. Hedged commodities also bear basis risk and currency risk which needs to be handled carefully.

Fall in prices of agricultural commodities may have negative impact on the income of farmers; therefore, to manage risk of price fall in agricultural commodities, Government of India has a minimum price support system. At the time of harvesting, government starts buying agricultural commodities at fixed minimum support price and stores it in government warehouses and uses that as a buffer stock. When the price starts shooting upward the government uses this buffer stock to maintain the adequate supply to curb the food inflation. If sufficient buffer stock is not available in warehouses, government imports the commodities and provides subsidies to compensate the difference in international and national prices if international prices are higher.

Without sound know-how of global markets, use of sophisticated risk management tools may be even more risky for these participants. In the last decade Indian commodity market has grown significantly, several futures contracts on more than 100 commodities have been introduced but liquidity, transparency and high transaction cost is still a major concern. In underdeveloped commodity market there are always concerns of price manipulation. In the past, trading in wheat, sugar and many more futures contracts had been stopped because of the fear of speculative activities. As a result of malpractices the trust of the market participants is lost. Therefore, it is necessary to strengthen the local commodity market for risk management. Policies to strengthen the basic infrastructure, dissemination of information and increase in awareness of using existing system are required to improve risk management practices. To increase the participation of poorly informed producers/individuals it is imperative to support intermediaries that may work as a link between smallholders and commodity markets.

Price volatilities in agricultural commodities are not only dependent on the global scenario, but also on local weather conditions as well. Price related instruments such as futures markets are not sufficient to handle the impact of weather related issues/rare event (such as natural calamities, financial crisis etc.). Weather sensitive and rare event sensitive instruments to tame the price risk such as catastrophe or “cat” bonds have been designed to channelise insurers’ own risk to the capital market. These instruments are available in international capital market and needs be introduced in local markets as well.

GUEST COLUMN**Direct Recapitalisation of PSU Banks may not always be the Best Option for Government of India****Deep N Mukherjee**

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Executive Summary

Indian Banking sector is straddled with INR 7,000 billion plus of distressed assets. There is possibly a broad understanding that the current legal and structural set-up to resolve the record high distressed asset level may be insufficient. In an effort to relieve the banks' balance sheets from the NPA burden, as well as to support the recapitalisation drive that the Govt. of India (GOI) has taken up for Public Sector Banks(PSU) ,new measures are urgently required. In this regard the proposal by the Prime Minister of India to establish National Asset Management Company to manage the 'bad loans' is a welcome thought.

In this paper the author proposes a framework for the Asset Management Company which may be referred to as Sovereign Distressed Asset Fund (SDAF). This will be a one off, closed ended fund with a long maturity date of say 10 years. The framework draws extensively on a variety of mechanisms that has already been adopted by 'bad banks' globally. It also draws on several proposals by noted economic thinkers and institutions on 'bad banks'. While no two bad-banks in the world are exactly the same, the author tries to customise the structure specifically for Indian conditions. However, it must be acknowledged that the building blocks of the SDAF are per se not 'new' new ideas in themselves.

The Key Benefits of the specific SDAF may be summarised as follows:

- a) The Distressed Assets will be removed from the books of the banks(both PSU and Private) without causing a write-off in value. Thus the banks will not require equity infusion for the purpose of distressed asset since bank's equity will not be impaired for this specific purpose
- b) There will be no immediate cash outflow from the GOI for the purpose of recapitalising the PSU bank's for their NPA. Infusion of equity will be required for alignment with BASEL III guidelines, which of course is large amount; estimated by India Ratings & Research to be to the tune of INR 2,400 billion between now and 2019.
- c) While bankruptcy code may take time, the proposed fund if endowed with special powers may not only free up productive assets lying underutilised with unviable corporates, by liquidating such corporates. But it will also facilitate turnaround of viable corporates by infusing or causing to infuse fresh funds in such corporates.

Current Recovery Mechanism Not Sufficient

Indian Banking sector is straddled with INR 7,000 billion plus of distressed assets ie; Non-Performing Assets (NPA) plus restructured assets. However, economic conditions as well as well-documented weakness of India's legal system does not inspire much confidence that the current NPA issue will resolve on its own.

Bankruptcy Code in Its Own Time: Currently a lot of expectation is being build up around the Bankruptcy Code, a draft of which has been made available for comments. The highly optimistic and the best case scenario is that the Bankruptcy Code becomes a law in the upcoming winter session (2015-16) of the Parliament. Whatever be the final form that gets passed by the Parliament, for the law to be actually implemented subsequent notifications, focussing on actual execution aspects of the law as well as clarification, will come from the concerned Ministry. Then it will percolate through the legal system. It may be fair to assume that even in India gets a Bankruptcy law in 2015-16 the first judgements enabling bankruptcy resolutions may take a further three to five years.

However, if the Indian Company's Act 2013 provides any template, one may always expect that the final legal output may be much more diluted (than the initial draft) and more aligned to the needs of the company's promoters/majority shareholders often to at the cost of other stakeholders including minority shareholders.

Proposed Distressed Asset Management Fund: The last time Indian banking system had system wide NPA rate well above 10% was in late 1990s. In response to the situation the Government enacted the SARFAESI Act , which was supposed to enable bankers to enforce the security(usually property and non-agricultural land) against which the loans were given but subsequently they defaulted. SARFAESI Act aspired to improve recovery from bad debt which was a shortcoming of existing recovery procedures such a BIFR and DRT. Further Asset Reconstruction Company (ARC) came into being, which were supposed to be the entities which aggregated the debt from various banks and facilitate not only the recovery process but ‘cleaned’ the bank’s books by buying the NPAs.

From the current experience one may tend to conclude that the success of ARC with respect to recovery of NPA from large corporate has been somewhat limited. Of course recovery from SME as well as personal loan has been more encouraging. Given this observation, in addition to the fact, the balance sheet size of ARC’s are also relatively small and may only absorb a fraction of the currently outstanding NPA, the system has been looking for an alternate solution. The Prime Minister recently shared with the public his intention to establish a National Asset Management Company. This is expected to take over a significant slice of bank’s system’s bad loans. This is also expected to facilitate the capitalisation requirement of banks.

Global Experience of Bad Banks-In Brief

First there was no Bad-bank: Within the recent times, the earliest instance of a nation-wide banking crisis attributable to extensive credit default occurred in Spain during 1978-83. In response to the banking crisis which ultimately had a total cost of 7% of Spain’s GDP, first the Deposit Guarantee Fund was created to protect small depositors. The in 1978 a vehicle , to acquire bad loans, called Corporacion Bancaria(owned 50% by Private banks and 50% by Bank of Spain) came into being which was in 1980 merged in to DGF. The DGF acquired the NPAs with the purpose to either sell-off assets which were saleable. The DGF was able to clean up the bank’s balance sheets in a period of 14 months but then the cost of this cleaning was mostly borne by taxpayers.

Then there was Mellon Bank: In 1988, Mellon Bank had USD 1.4 Billion of bad loans mostly belonging to real estate and energy sector. A bad bank named Grant Street national bank was carved out of Mellon Bank with USD 130 million of Mellon’s equity and the bad loans. Grant Street was wound up in 1995 after its objective was broadly met.

Bad banks continued thereafter: Two broad formats of bad banks emerged. One where a specific bank(assuming the problem was restricted to a single bank) transferred the bad assets to a separate legal entity usually a subsidiary(as in Mellon Bank) or such as one created by Swiss National Bank(SNB) for UBS post 2008, in the form of a fund called SNB Stabilisation Fund(StabFund).

The other format being a nation-wide agency, where there is a system-wide problem of bad loans. Each of these formats may be further differentiated based on whether there was significant government funding (tax-payers' money) or there was private participation.

Generally, starting with the experience of Spain and subsequently Sweden(banking crisis 1990-94) it may be suggested that system wide problem requires governmental support and infusion of tax-payers money. Among the major learnings from Sweden being the requirement of political consensus. Here it was found that in order to gain popular public support for bailing out the banking sector, it may be worthwhile to remove unsuccessful owners and managers of distressed businesses.

Subsequently , several countries, such as Slovenia, Ireland, Japan , Greece at various times facing system wide issues of bad loans opted for 'bad-banks' with varying levels of success and of course providing critical learning. These learnings may form the basis for developing a framework for an Asset Management Company (AMC) for India.

Proposal for Sovereign Distressed Asset Fund

Objectives of the Fund: This may be summarised as follows:

- a) The Fund should be capital efficient so that upfront fund infusion from GOI is minimised.
- b) The Fund should clean up the balance sheet of the banks at a minimal cost to the financial system.
- c) The fund should not be just an accounting tool to park bad loans from banks, but it should be able to maximise recovery from the bad debt so the various investors in the fund may get reasonable returns.
- d) To minimise distortion of incentives for any party concerned such as banks, bad borrowers and SDAF itself.
- e) The Fund should focus on economics and not accounting: Given that accrual accounting with respect to aspects such as recovery often distorts the motivation of bankers to maximise current value from recovery. For instance, if there is a bad debt of INR 100 and there is a

method to recover INR 20 immediately vis-à-vis to wait for ten years to get INR70. Even if the first option has higher economic sense most bankers would prefer the second option. This is so because, in the first option the bank would have to immediately write-off INR80 and show it as a loss. While in the second option, they will have the option to wait and write-off only INR30 at the end of ten years. Even provisioning may not deter banks to 'look good' from an accounting perspective despite the poor economics involved.

Basic Operating Guidelines:

- a) The SDAF needs to be created as a one-off fund as an Act of Indian Parliament. For assets sold to the SDAF, it will have the right to liquidate or change management of the company with summary notice.
- b) The SDAF will 'buy' bad loans from banks at the banks' book value.
 - Since there will be no write-off of assets of the banks, the bank's equity will not be impaired thus recapitalisation for the purpose of NPA related impairment will not be required
- c) The SDAF will pay the banks in terms of long-term bond (Category B Units: Refer Structure of the Fund), maturity of which coincides with maturity of the fund. The bonds will have built-in put options so that they may be retired by the SDAF if there is an early overall recovery. The payment of the principal and accrued interest (may be very low returns of 3%-4%) on these bonds would otherwise be contingent on the overall recovery performance of the SDAF. Of course a variation can be zero interest payment but principal guaranteed by GOI and payable at the end of 10 years
 - This will ensure that the GOI has no immediate cash outflow to support the banks. However, in the second variation where the GOI guarantees the payment at the end of ten years there will be cash-out flow at the end of the period. But it may be hoped that recovery will reduce the amount of payment from government, besides the current value of that future payment will possibly be around half of the amount. At any rate both these options ensures that the current cash outflow from GOI will be minimised.
 - The bonds issued will be treated as assets on the books of banks.
- d) The SDAF will require cash for infusing in those distressed corporates which may be viable or are likely candidates for turnaround. The SDAF can issue units (Category A Units: Refer Structure of the Fund) which may be subscribed by multilaterals, Foreign and Domestic Institutional Investors and banks themselves. The principal of these units as well as market

rate of interest (commensurate with G-Sec) will be guaranteed by the GOI. A variation may be considered where GOI guarantees a fraction (say 80%) of the principal however the investors in these units get to share the upside of the fund along with the sponsor of the fund ie; GOI.

- e) The Source of income for the SDAF will be as followed:
- I. Sale of assets of corporates which are unviable.
 - II. Infuse capital in corporates which can be turned around either with or without change of management. These corporates will have the SDAF as the majority shareholder. If these corporates turnaround they may be sold via the routes of IPO or a strategic sale.
 - III. For projects where cash infusion will facilitate completion of the same, they can be sold for post completion.
 - IV. The core principle remains to maximise economic profit for the SDAF

Structure of the Fund:

- a) The SDAF will issue two classes of Units.
- a. Category A Units which will be subscribed to by investors to the SDAF. For any proceeds from recovery (net of recovery expense) Category A Unit holders would have the first claim.
 - b. After the entire amount due to Category A Units are serviced, then the residual will flow to Category B Unit holders ie; banks from whom the bad loan was purchased.

Challenges of the structure: The challenge for the SDAF may be creating the Act of Parliament to support its creation. However, to the extent that the Act allows change of management or takeover of distressed companies by SDAF there be broader consensus for the SDAF. Likewise, to the extent the banks which generated the bad loans in the first place, are not perceived to make a windfall gain the opposition the Act may be lower.

Some banks may be reluctant to sell the bad assets to the SDAF, under the pretext that the recovery prospects of their specific bad assets may be better than the overall pool of bad debts, thus their pay-out for the Category B Units will be penalised for the poor loan originations of their peers. Here the argument is that, if these banks are so confident that their recovery would be better they can continue to hold the bad loans onto their books. However, the other solution may be to make it mandatory for PSU banks to sale the bad loans to the SDAF.

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