

# a₹tha

A NEWSLETTER OF THE FINANCE LAB

July 2016, Volume 3, Issue 6





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A NEWSLETTER OF THE FINANCE LAB



Indian Institute of Management Calcutta

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# Editorial

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The International Monetary Fund (IMF), in its World Economic Outlook released on July 19, 2016, concludes that the outcome of the Brexit vote implies ‘the materialization of an important downside risk for the world economy’. The global outlook for 2016 and 2017 is, therefore, downgraded- the downward revision in GDP growth rates was maximum for UK- revise downward by 10 basis points for 2016 and 90 basis points for 2017. UK’s GDP growth for 2017 is now projected at 1.3% only. India’s GDP growth forecast for 2017, on the other hand, is 7.4%- ahead of China’s 6.2% for the same period. India needs to sustain the above-7% growth rate for at least next three decades to pull large part of our population out of poverty and post economic indicators comparable with China. In order to sustain such a growth rate, banks in India need to be better capitalized and equity and debt markets liquid and buoyant. Much of these can be achieved if we have transparent regulation, absence of cronies, and robust financial markets.

The sixth issue of Volume 3 of *aṛṛtha* has four articles and the summary of India Research Conference held at NYU-Stern on 20 May, 2016. The first article analyses a new guideline for equity restructuring for Central Public Sector Enterprises. In the second article, the author discusses the state of non-performing assets (NPAs) of the Indian public sector banks and concludes that to improve the situation, professionalism of the management and freedom from interferences need to be ensured. In the third article, the authors study the impact of the latest UDAY scheme on the Indian power sector and electricity distribution companies. In the fourth piece, the author takes up the issue of corporate profit and its growth rate in India. After a detailed discussion, the author concludes that unless government spends heavily on the economy and households too spend, the aggregate corporate profit growth of India may continue to remain lukewarm. The last piece is the summary of the five papers that were presented in the India Research Conference held at NYU-Stern in May 2016.

You may send your comments and feedback on this issue to [ashok@iimcal.ac.in](mailto:ashok@iimcal.ac.in)

Happy reading!

**Ashok Banerjee**

# Equity Restructuring: Analysing a new guideline

## Ashok Banerjee



Ashok Banerjee is a senior Professor in the Finance and Control group at IIM Calcutta. He takes several advanced courses in Finance like Corporate Financial Reporting, Corporate Finance, Corporate Restructuring, Quantitative Applications in Finance and Trading Strategies. He is also the faculty in-charge of the Financial Research and Trading Laboratory at IIM Calcutta.

The principal objective of equity restructuring is to provide adequate returns to shareholders and improve investors' confidence. Equity restructuring is also used as a strategic tool to minimise cost of capital, write-off losses and perhaps increase liquidity of stocks. Writing off losses or writing down assets against equity is a well-practiced strategy. What has assumed more significance recently is the use of free cash by a profit-making firm. Free cash is the cash left with a firm after meeting profitable investments requirements. It is the responsibility of the managers to ensure that such free cash is not unproductively used. A natural choice could be distribution of such free cash to the shareholders by way of dividend or share buyback. For example, the free cash flow per share of Apple has grown from USD 2.6 in 2010 to USD 12.6 in 2015. This is after significant share repurchase- the number of shares outstanding has dropped by 13% over the past five years for Apple. Apple has cash and marketable securities worth USD 233 billion out of total assets of around USD 300 billion in March 2016. Obviously there will be clamour for further distribution of free cash to the shareholders. In India, TCS reported a free cash flow per share of INR 95.7 in March 2016 up from INR 26.4 in 2010. This is after paying INR 26000 crore as dividend in the past two years. TCS got its shares listed in 2004 and has never repurchased its shares. TCS shareholders may soon demand even higher dividend payments. However, managers must ensure that they do not face underinvestment problem due to lack of cash in future. Therefore, an objective assessment of future capital expenditure is to be made before distributing free cash to the shareholders.

Prudent use of free cash is also a controversial issue for public sector enterprises in India. For example, Coal India had generated an operating cash flow of INR 197 billion in 2014-15 and spent only INR 49 billion in capital expenditure during the same period. Recently (May 2016) the Department of Investment and Public Asset Management (DIPAM), Ministry of Finance ,

Government of India has issued a guideline to all central public sector enterprises (CPSEs) on how to restructure equity and distribute free cash flows to shareholders. The guideline attempts to bring together all equity restructuring options under a consolidated document. The guideline also categorically highlights its binding nature and requires specific approval of DIPAM for any exemption. A CPSE is an entity where Government of India and/or Government-controlled one or more body corporate have controlling interest.

**Table 1: Capital Restructuring Proposal for Central Public Sector Enterprises**

<b>Mode</b>	<b>Condition/Criteria</b>
Cash Dividend	Minimum annual dividend of 30% of PAT (Profit after tax) or 5% of Net Worth, whichever is higher
Bonus Shares (Stock Dividend)	Compulsory issue of bonus shares if reserves and surplus is equal to or more than 10 times of paid up capital
Share Buyback	Option to buyback should be exercised if Net Worth is at least Rs. 2000 crore and Cash and Bank balance at least Rs. 1000 crore.
Stock Splits	Compulsory split if market price or book value of a share exceeds 50 times of its face value.

*Source: Guidelines of Department of Investment and Public Asset Management (DIPAM), Govt. of India*

### **Dividend Policy**

The guideline of the Ministry of Finance did not require CPSEs to declare their dividend policy in the annual report. It simply mentioned the quantum of minimum dividend to be paid each year. The capital market regulator (SEBI) is contemplating mandatory disclosure of a company's dividend policy in an initial public offering (IPO) prospectus. Regulators believe that shareholders demand transparency on dividend and have every right to know the expected use of cash, if the same is not distributed as dividend. SEBI has recently made it mandatory for top 500 listed companies to declare a dividend distribution policy to their shareholders. SEBI has also mentioned that if a company decides not to pay out dividend in a particular year, it must explain the reason and how the retained earnings will be used. A stated dividend policy will remove speculation and

help analysts estimate fair value of shares. The Financial Reporting Council of UK has brought out a report<sup>1</sup> suggesting how companies can make dividend disclosures more relevant for investors.

The top ten<sup>2</sup> CPSEs have distributed Rs. 2.5 trillion as dividend over the past ten years (up to 31 March 2015) and spent only Rs. 1.3 trillion for organic growth (net capital expenditure). The dividend paid is more than 5% of net worth of the CPSEs. Though the gross capital expenditure of the top ten CPSEs was Rs. 3.4 trillion, much of it was funded by depreciation. Dividend paid by these CPSEs over the past ten years is almost equal to the GDP of Odisha as on March 2015. Therefore, even in the absence of such strong guidelines, the profitable CPSEs were paying handsome dividend to the shareholders, the principal beneficiary being Government of India. The top ten NIFTY companies (excluding CPSEs) paid Rs. 1.8 trillion as dividend during the same period- almost 30% lower than the CPSEs.

ONGC paid dividend of about Rs. 764 billion during the past ten years and spent Rs. 181 billion on capital projects. Coal India paid about Rs. 590 billion dividend in last ten years. The capital expenditure (net) incurred by the company during this period was abysmally low at only Rs. 2 billion. The third highest dividend paying CPSE was NTPC which distributed Rs. 418 billion as dividend and spent more than double of the amount (Rs. 863 billion) for capacity building. Government of India, as principal shareholder of the CPSEs, has directed all profitable CPSEs to follow the minimum dividend guideline. Is it right for the major shareholder to 'compel' companies to pay any pre-announced dividend? Any prudent dividend policy would lay down circumstances when dividend will or will not be paid. The quantum should only be decided after evaluating the following factors: (a) future expansion need; (b) profit earned; and (c) free cash flow. However, in view of huge cash pile up and lack of clear expansion plans, the CPSEs would definitely face the heat of the shareholders for distribution of free cash. The situation equally applies to companies in the private sector.

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<sup>1</sup> <https://www.frc.org.uk/Our-Work/Publications/Financial-Reporting-Lab/Lab-Project-Report-Disclosure-of-dividends-%E2%80%93-poli.pdf> (accessed on 15 July, 2016)

<sup>2</sup> By market capitalization as on 30 June 2016



**Table 2: Utilisation of Cash Flows of top 10 CPSEs** (figs in Rs. Crore, unless otherwise stated)

	Variable	Mar-15	Mar-14	Mar-13	Mar-12	Mar-11	Mar-10	Mar-09	Mar-08	Mar-07	Mar-06	Own(%)
Coal India	OCF	12604.96	13620.25	10542.98	9288.35	120.93	2293.61	1745.87	1719.97	1361.14	2396.50	79.65
	Net capex	33.67	81.43	44.21	19.86	46.71	10.54	8.47	-1.77	-7.20	-6.95	
	Net Worth	16734.19	16445.24	20516.16	19564.75	17816.01	17060.72	14115.77	13369.30	12654.64	11341.59	
	Dividend	13082.58	21799.30	6440.75	6245.52	2209.13	2210.00	1705.42	1995.26	1887.55	1415.40	
ONGC	OCF	24972.12	37888.02	32201.23	35051.31	39338.37	20388.01	22272.74	21676.23	22910.02	20367.09	68.93
	Net capex	-3225.61	-818.38	3191.39	6091.71	6094.90	3224.50	2407.70	1572.75	536.11	-1007.24	
	Net Worth	289201.95	273450.01	248906.45	225913.46	195008.86	174565.20	157470.83	141234.80	123847.85	107919.34	
	Dividend	7913.31	8339.95	9414.07	7268.89	10048.13	6842.30	6841.94	6629.28	6702.99	6417.03	
NTPC	OCF	14234.70	15732.18	15495.17	10709.85	11085.03	10610.75	9688.10	9786.00	8065.30	5972.00	69.96
	Net capex	12210.93	12579.85	12894.45	7923.98	8599.85	8136.58	7619.40	5849.00	5869.20	4625.70	
	Net Worth	81657.35	85815.32	80387.51	73291.17	67892.25	62437.42	57370.10	52638.60	48596.80	44958.70	
	Dividend	12368.21	4947.28	3504.34	3545.55	3133.26	3133.27	2968.30	2885.90	2638.50	2638.60	
IOCL	OCF	44487.42	22049.89	11610.60	-2759.77	5683.89	-464.70	-23198.75	-9382.39	-2919.61	-961.51	58.28
	Net capex	-1806.93	-1341.89	-3218.44	-3152.33	-2721.56	-2322.56	-1372.67	-1874.54	-1960.47	-1800.49	
	Net Worth	67969.97	65992.08	61124.31	57876.70	55332.32	50552.93	43998.18	41086.25	34857.29	29302.67	
	Dividend	2470.85	1761.94	1408.15	2664.82	3663.40	1065.07	848.41	1813.44	2468.24	1332.06	
BPCL	OCF	18194.41	8404.10	5480.45	925.84	3081.87	-1515.15	6212.34	417.13	4646.65	1364.98	54.93
	Net capex	5500.60	2489.95	1457.32	573.49	820.96	2115.66	1253.16	930.73	883.22	1215.72	
	Net Worth	22467.48	19458.76	16634.02	14913.86	14057.62	13086.71	12128.11	11676.83	10273.54	9139.43	
	Dividend	1229.24	795.39	397.70	506.54	506.48	253.15	144.62	361.67	307.17	268.45	
Power Grid	OCF	15041.77	15399.44	11283.79	6402.53	5564.99	6619.17	6590.64	2990.83	4345.77	3686.80	57.9
	Net capex	-3931.96	-2996.66	-2939.46	-1944.41	-1816.91	-1831.03	-345.11	-1220.37	-712.73	-741.88	
	Net Worth	38166.59	34459.63	26239.47	23487.78	21367.00	15941.90	14623.59	13507.37	10700.43	10001.99	
	Dividend	<u>1046.32</u>	<u>1192.21</u>	<u>1351.89</u>	<u>949.11</u>	<u>652.39</u>	<u>505.08</u>	<u>505.08</u>	<u>464.28</u>	<u>330.45</u>	<u>183.23</u>	
GAIL	OCF	2499.32	4921.57	5033.41	4487.74	3077.25	4677.43	2577.88	3412.15	1459.36	3323.33	56.11
	Net capex	713.45	2656.33	4476.65	5826.28	3978.62	2989.08	1970.17	655.57	1460.35	49.91	
	Net Worth	29119.52	27072.33	24227.80	21625.83	19253.34	16799.00	14769.63	13004.88	11392.91	9973.30	
	Dividend	<u>1332.05</u>	<u>1499.12</u>	<u>1429.93</u>	<u>1253.11</u>	<u>1109.37</u>	<u>742.03</u>	<u>1187.24</u>	<u>593.62</u>	<u>964.25</u>	<u>1157.10</u>	
NMDC	OCF	4007.22	3720.80	3087.07	4594.58	4861.59	3604.01	2778.34	2475.94	2052.19	1569.37	80
	Net capex	-17.11	94.59	70.62	86.39	277.33	39.24	178.62	62.52	-26.06	-8.02	
	Net Worth	32331.74	29988.30	27510.96	24406.36	19214.52	14272.43	11636.91	8289.65	5800.93	4014.65	
	Dividend	<u>2874.42</u>	<u>4955.90</u>	<u>2180.59</u>	<u>1645.46</u>	<u>852.59</u>	<u>765.22</u>	<u>622.46</u>	<u>643.20</u>	<u>529.37</u>	<u>404.35</u>	
HPCL	OCF	17841.09	8807.56	895.55	2226.26	1001.43	3281.40	5840.76	-1729.93	3787.51	604.59	51.11
	Net capex	2095.27	1945.75	1683.29	2387.17	3103.32	2445.60	894.94	2292.47	3136.55	1790.94	
	Net Worth	16022.09	15012.16	13726.40	13122.52	12545.81	11557.97	10730.63	10563.29	9598.65	8735.74	
	Dividend	<u>613.58</u>	<u>336.67</u>	<u>334.43</u>	<u>550.92</u>	<u>473.14</u>	<u>209.27</u>	<u>119.37</u>	<u>490.58</u>	<u>347.90</u>	<u>386.57</u>	
BHEL	OCF	775.48	4518.14	1864.78	-813.57	2658.62	1585.06	3291.22	3477.90	2821.37	1623.83	63.06
	Net capex	-620.88	-319.25	21.64	495.27	1179.34	1255.50	989.29	400.39	162.86	49.56	
	Net Worth	34084.60	33047.05	30444.10	25373.21	20153.84	15917.37	12938.81	10774.21	8788.27	7301.38	
	Dividend	<u>594.02</u>	<u>1315.55</u>	<u>1648.57</u>	<u>1793.70</u>	<u>1456.32</u>	<u>1087.85</u>	<u>872.99</u>	<u>858.89</u>	<u>405.14</u>	<u>473.73</u>	

Source: Ace Equity.

Net Capex=Capex- Depreciation. OCF= After-tax operating cash flows. Own(%)= Government ownership

### Bonus Shares

The guideline directs that a CPSE should issue bonus shares if the retained earnings are more than 10 times paid up capital. The guideline further states that whenever the multiple (retained earnings/ paid up capital) exceeds 5, the concerned CPSE should evaluate the possibility of offering bonus

shares. It is generally understood that bonus shares reward shareholders. Typically, whenever retained earnings of a company become disproportionately higher and the concerned firm is unable to reward its shareholder by way of cash dividend, bonus shares prove useful. However, it is also to be noted that issue bonus shares act as poison pill and create permanent pressure on the treasury of a firm for future dividends. In that sense, bonus debenture could be a better choice.

Seven out of top ten CPSEs are required to issue bonus shares if one follows the diktat of the DIPAM guidelines. Most of these are from energy sector. It may be noted that five of these CPSEs had already issued bonus shares in the last ten years. If Government of India has plans to disinvest further its stake in these CPSEs, it is always prudent to have lower equity base. The blanket guideline on issue of bonus shares would bloat the paid up capital of many entities thereby making them unattractive to potential investors.

**Table 3: Potential Bonus Issuance** (*figs in Rs. Crore, excepting the multiple*)

	Variable	Mar-15	Mar-14	Mar-13	Mar-12	Mar-11	Mar-10	Mar-09	Mar-08	Mar-07	Mar-06
Coal India	RE	10417.83	10128.88	14199.80	13248.39	11499.65	10744.36	7799.40	7052.93	6338.28	5025.23
	Capital	6316.36	6316.36	6316.36	6316.36	6316.36	6316.36	6316.36	6316.36	6316.36	6316.36
	Multiple	1.65	1.60	2.25	2.10	1.82	1.70	1.23	1.12	1.00	0.80
ONGC	RE	284924.19	269172.25	244628.69	221635.70	190731.10	172426.32	155331.94	139095.91	121708.97	106493.41
	Capital	4277.76	4277.76	4277.76	4277.76	4277.76	2138.89	2138.89	2138.89	2138.89	1425.93
	Multiple	66.61	62.92	57.19	51.81	44.59	80.61	72.62	65.03	56.90	74.68
NTPC	RE	73411.89	77569.86	72142.05	65045.71	59646.79	54191.96	49124.60	44393.10	40351.30	36713.20
	Capital	8245.46	8245.46	8245.46	8245.46	8245.46	8245.46	8245.50	8245.50	8245.50	8245.50
	Multiple	8.90	9.41	8.75	7.89	7.23	6.57	5.96	5.38	4.89	4.45
IOCL	RE	65542.02	63564.13	58696.36	55448.75	52904.37	48124.98	42805.81	39893.88	33689.28	28134.66
	Capital	2427.95	2427.95	2427.95	2427.95	2427.95	2427.95	1192.37	1192.37	1168.01	1168.01
	Multiple	26.99	26.18	24.18	22.84	21.79	19.82	35.90	33.46	28.84	24.09
BPCL	RE	21744.40	18735.68	15910.94	14552.32	13696.08	12725.17	11766.57	11315.29	9912.00	8839.43
	Capital	723.08	723.08	723.08	361.54	361.54	361.54	361.54	361.54	361.54	300.00
	Multiple	30.07	25.91	22.00	40.25	37.88	35.20	32.55	31.30	27.42	29.46
Power Grid	RE	32935.00	29228.04	21609.74	18858.05	16737.27	11733.06	10414.75	9298.53	6913.02	6417.36
	Capital	5231.59	5231.59	4629.73	4629.73	4629.73	4208.84	4208.84	4208.84	3787.41	3584.63
	Multiple	6.30	5.59	4.67	4.07	3.62	2.79	2.47	2.21	1.83	1.79
GAIL	RE	27851.04	25803.85	22959.32	20357.35	17984.86	15530.52	13501.15	12159.23	10547.26	9127.65
	Capital	1268.48	1268.48	1268.48	1268.48	1268.48	1268.48	1268.48	845.65	845.65	845.65
	Multiple	21.96	20.34	18.10	16.05	14.18	12.24	10.64	14.38	12.47	10.79
NMDC	RE	31935.27	29591.83	27114.49	24009.89	18818.05	13875.96	11240.44	8157.49	5668.77	3882.49
	Capital	396.47	396.47	396.47	396.47	396.47	396.47	396.47	132.16	132.16	132.16
	Multiple	80.55	74.64	68.39	60.56	47.46	35.00	28.35	61.72	42.89	29.38
HPCL	RE	15683.08	14673.15	13387.39	12783.51	12206.80	11218.96	10391.62	10224.28	9259.70	8396.80
	Capital	339.01	339.01	339.01	339.01	339.01	339.01	339.01	339.01	339.01	338.94
	Multiple	46.26	43.28	39.49	37.71	36.01	33.09	30.65	30.16	27.32	24.77
BHEL	RE	33595.08	32557.53	29954.58	24883.69	19664.32	15427.85	12449.29	10284.69	8543.51	7056.62
	Capital	489.52	489.52	489.52	489.52	489.52	489.52	489.52	489.52	244.76	244.76
	Multiple	68.63	66.51	61.19	50.83	40.17	31.52	25.43	21.01	34.91	28.83

Source: Ace Equity. RE= Retained earnings, Capital= Paid up capital, Multiple= RE/Capital

## Share Buyback

Theory of corporate finance tells us that one of the motivations of share buyback is to distribute free cash to the shareholders so that the latter can use the funds profitably. There are examples of shareholders' pressure for buyback whenever any company holds too much of cash. But the real

question is how much cash is too much? The DIPAM guidelines provide that any CPSE with a cash balance of more than Rs. 1000 crore should seriously consider share buyback to distribute free cash. If one considers current investments as part of cash and cash equivalents, all the ten top CPSEs (Table 4) should buyback shares. The main motivation behind the guideline seems to be reducing the budget deficit of the central government rather than enhancing shareholder wealth. The guideline may also contradict its own recommendations. For example, ONGC is required to issue bonus shares, pay hefty dividend and also buyback shares- all in the same year! Whereas the financial statements of ONGC show that the company has already severely depleted its cash reserve from a high of 18% of total assets to only 1.2% in March 2015. It is always prudent to consider relative rather than absolute liquidity while taking a share buyback decision. One might of course argue that ONGC has spent only 7% of operating cash of past ten years in capital projects and hence clearly the company does not have any immediate need of hoarding cash. It has already paid 28% of its operating cash as dividend over the past ten years. Hence, there is no valid reason of ‘forcing’ the company to go for a share buyback with such a low relative liquidity position. The guideline should have specified a relative liquidity criterion (e.g., cash as a percentage of total assets) to trigger share buyback.

**Table 4: Share Buyback Candidates** (*figs in Rs. Crore, unless otherwise stated*)

	Variable	Mar-15	Mar-14	Mar-13	Mar-12	Mar-11	Mar-10	Mar-09	Mar-08	Mar-07	Mar-06
<b>Coal India</b>	Net Worth	16734.19	16445.24	20516.16	19564.75	17816.01	17060.72	14115.77	13369.30	12654.64	11341.59
	Cash and cash equivalents	9250.31	10608.59	18272.16	15524.72	11659.52	9133.36	6462.76	4663.96	3728.98	2863.15
	Cash (% total assets)	39.4%	42.4%	53.7%	50.5%	42.1%	38.1%	29.0%	23.7%	19.6%	15.8%
<b>ONGC</b>	Net Worth	289201.95	273450.01	248906.45	225913.46	195008.86	174565.20	157470.83	141234.80	123847.85	107919.34
	Cash and cash equivalents	2760.07	10798.88	13218.59	20976.47	14481.14	18912.72	19096.21	22417.66	19280.79	8812.82
	Cash (% total assets)	1.2%	4.7%	6.2%	10.3%	8.1%	11.7%	13.1%	18.2%	14.6%	8.0%
<b>NTPC</b>	Net Worth	81657.35	85815.32	80387.51	73291.17	67892.25	62437.42	57370.10	52638.60	48596.80	44958.70
	Cash and cash equivalents	14756.87	16948.33	18490.16	17764.29	17997.26	16402.97	16271.60	14933.20	13314.60	8855.10
	Cash (% total assets)	7.2%	9.1%	10.8%	11.9%	13.5%	13.7%	15.0%	15.8%	15.8%	11.9%
<b>IOCL</b>	Net Worth	67969.97	65992.08	61124.31	57876.70	55332.32	50552.93	43998.18	41086.25	34857.29	29302.67
	Cash and cash equivalents	7382.81	9891.23	14141.89	14067.46	16135.69	20718.79	18503.76	17046.43	15411.10	7315.61
	Cash (% total assets)	3.2%	3.9%	6.1%	6.6%	8.9%	13.4%	13.5%	13.7%	15.2%	8.0%
<b>BPCL</b>	Net Worth	22467.48	19458.76	16634.02	14913.86	14057.62	13086.71	12128.11	11676.83	10273.54	9139.43
	Cash and cash equivalents	6449.29	4812.55	7489.76	6925.98	7470.41	11583.03	8109.19	9791.35	7598.68	3600.61
	Cash (% total assets)	9.2%	6.7%	11.2%	10.6%	13.4%	21.7%	17.1%	22.9%	22.5%	12.7%
<b>Power Grid</b>	Net Worth	38166.59	34459.63	26239.47	23487.78	21367.00	15941.90	14623.59	13507.37	10700.43	10001.99
	Cash and cash equivalents	2248.41	4601.87	1845.23	2520.14	3864.40	3277.64	2428.88	1865.59	1196.82	589.05
	Cash (% total assets)	1.3%	3.2%	1.6%	2.7%	5.1%	5.2%	4.5%	4.3%	3.3%	2.0%
<b>GAIL</b>	Net Worth	29119.52	27072.33	24227.80	21625.83	19253.34	16799.00	14769.63	13004.88	11392.91	9973.30
	Cash and cash equivalents	1141.64	2650.98	2396.89	940.92	2132.52	4171.51	3456.15	4472.99	2660.41	4495.94
	Cash (% total assets)	2.1%	5.0%	5.0%	2.4%	6.7%	13.9%	13.6%	20.7%	14.3%	20.5%
<b>NMDC</b>	Net Worth	32331.74	29988.30	27510.96	24406.36	19214.52	14272.43	11636.91	8289.65	5800.93	4014.65
	Cash and cash equivalents	18443.14	18657.23	21025.75	20264.58	17228.06	12854.94	9739.65	7198.80	4849.17	3109.46
	Cash (% total assets)	41.6%	45.0%	51.7%	57.6%	60.8%	60.1%	57.9%	66.5%	65.0%	57.3%
<b>HPCL</b>	Net Worth	16022.09	15012.16	13726.40	13122.52	12545.81	11557.97	10730.63	10563.29	9598.65	8735.74
	Cash and cash equivalents	5391.03	5158.75	2507.99	3113.45	4089.71	5501.54	5203.29	5971.77	5407.43	2386.37
	Cash (% total assets)	8.0%	6.6%	3.3%	4.4%	6.7%	10.7%	11.1%	14.4%	17.1%	9.6%
<b>BHEL</b>	Net Worth	34084.60	33047.05	30444.10	25373.21	20153.84	15917.37	12938.81	10774.21	8788.27	7301.38
	Cash and cash equivalents	9812.70	11872.93	7732.05	6671.98	9630.15	9790.08	10314.67	8386.02	5808.91	4133.97
	Cash (% total assets)	13.6%	15.1%	9.9%	9.1%	16.9%	19.1%	22.8%	24.7%	22.8%	21.0%

Source: Ace Equity

## Stock Split

There are two theories behind corporate motivation for stock split- first, split enhances liquidity of stocks and diversifies the shareholders; and second, it sends a signal of superior performance of the firm. Empirical evidence, however, supports the hypothesis of the liquidity theory. The DIPAM guidelines mention that whenever market price or book value of share of a CPSE exceeds 50 times its face value, the CPSE will split its shares appropriately. Figures for the financial year 2014-15 (not reported here) suggest that three out of top ten CPSEs (ONGC, NMDC and BHEL) is required to split their shares on book value basis. However, if one looks at the market value-to-face-value multiple, there are four companies (BPCL, NMDC, HPCL and BHEL) having such multiple more than 50 and hence are required to split stocks. If one CPSE has a face value of Rs. 10 per share, the guidelines suggest that the CPSE with a book or market value of share more than Rs. 500 should consider stock split. Isn't that too predictable?

Equity restructuring is a continuous process and is used by the management as a technique to enhance the net worth of a company. Equity restructuring strategies increase the price-to-book multiple of firms. Share buyback is not that popular in India as the shares so bought back are to be cancelled. Cash dividend, on the other hand, is a more popular form of distribution of cash to shareholders. But dividend is stickier than share buyback. Hence, if a firm has to distribute a large amount of cash to shareholders, it is always prudent to opt for the buyback route. Any restructuring action generally conveys positive signal to the market. But if the actions are pre-defined and follow some cardinal principles, there would be no surprises and market would factor in such actions in the prices much before the actual events. Splitting stock when the market price exceeds INR 500 (with a face value INR 10) is too low a level for such action. For example, 43 out of 50 NIFTY companies have share prices more than 50 times of their respective face values. If these companies start splitting stocks (some of them have already done that), the market will witness a surge in supply which may not always increase the return of the stocks.

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# Non-Performing Assets of Indian Public Sector Banks: Is all Well?

**Partha Ray**



Partha Ray, Ph.D., is Professor, Economics, Indian Institute of Management Calcutta. Prior to joining Indian Institute of Management Calcutta, Prof. Ray, a career central banker, was the adviser to Executive Director, International Monetary Fund, Washington D.C. during 2007-2011.

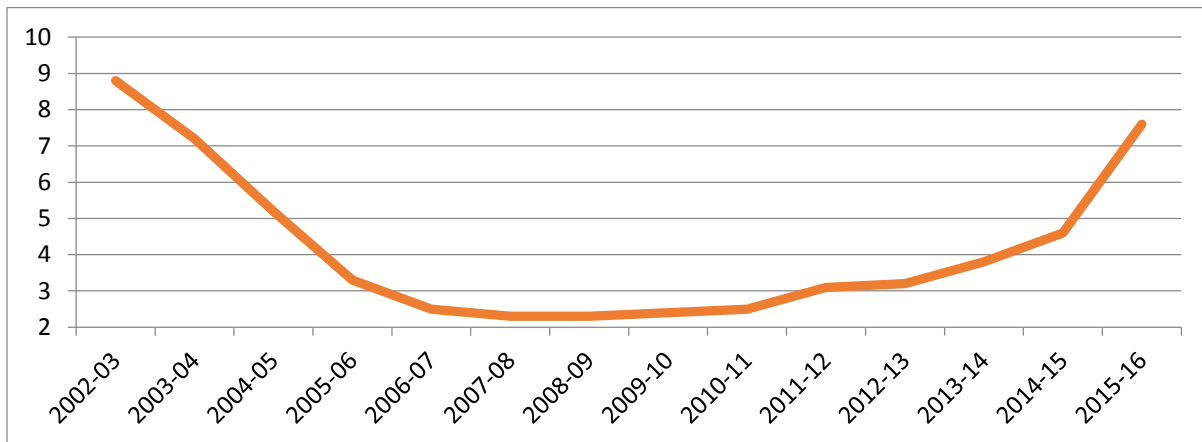
*The Financial Stability Report* of June 2016, recently released by the Reserve Bank of India (RBI) is an interesting reading. Notwithstanding the standard Central Bank Speak, often couched in terms of what is known as ‘constructive ambiguity’, the report reveals some serious concerns on Indian banking - the most important being the state of non-performing assets (NPAs) of the Indian public sector banks.

The report confirms the already known fact that not all is well in the health of Indian banks. In fact, the gross NPAs rose sharply to 7.6 per cent (of gross advances) in March 2016 - this is 250 basis points increase over the last six months - from 5.1 per cent in September 2015. But this is only part of the story - if one adds the quantum of restructured assets to NPAs, then the overall "stressed advances" rose to 11.5 per cent in March 2016. Stripped of jargon, in simple terms, it reveals that more than 10 per cent of the loans extended by banks in India are bad debt.

## **Trends in NPAs**

But was this expected? In fact, if one looks at the intertemporal behaviour of NPAs of banks in India since 2002-03, numbers show remarkable improvements till about 2009. Since then the NPA situation started deteriorating, so much so that by March 2016, it appears that all the progress achieved during the last one decade or so, has evaporated and Indian banks in 2016 are back to the situation prevailing in 2002 (Chart 1)!

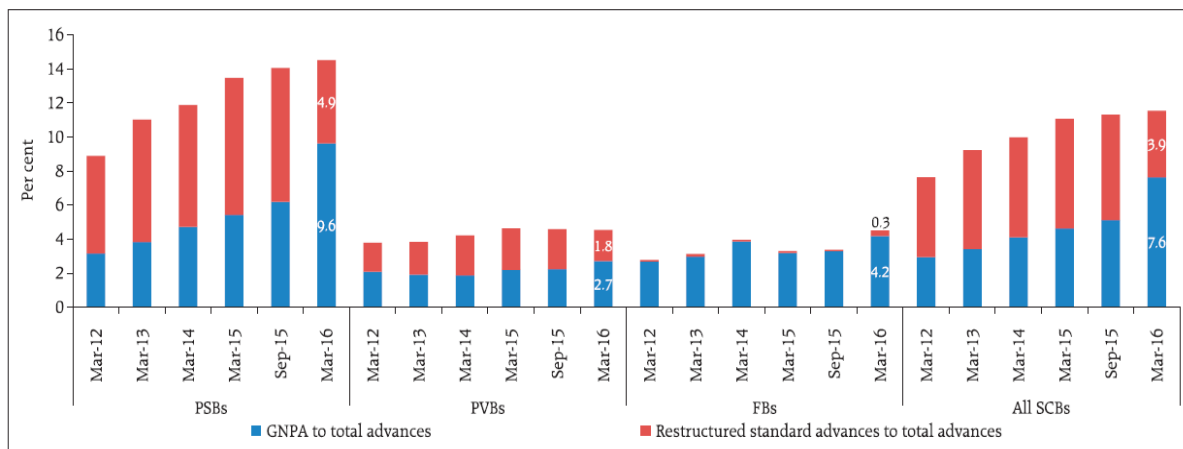
**Chart 1: Trends in Gross Non-Performing Assets of the Banking Sector in India**  
(% of Gross Advances)



Source: Handbook of Statistics on Indian Economy, RBI, various Issues.

But this deterioration is not uniform across all banks. There is great difference in the extent of formation of NPA across ownership-specific bank-groups. Effectively, the derioration in NPA front is primarily driven by the public sector banks; in recent times, the NPAs of private banks are less than one-third than those of public banks (Chart 2). Since the issue is primarily related to the public sector banks, one can go a step further and add that it is beyond the financial sector in India and that it becomes effectively a fiscal risk, imposing a burden on the already stressed State Exchequer.

**Chart 2: Asset quality of Scheduled Commercial Banks**



Source: Financial Stability Report, June 2016, RBI

## **To release or Not to Release (the names of big defaulters)?**

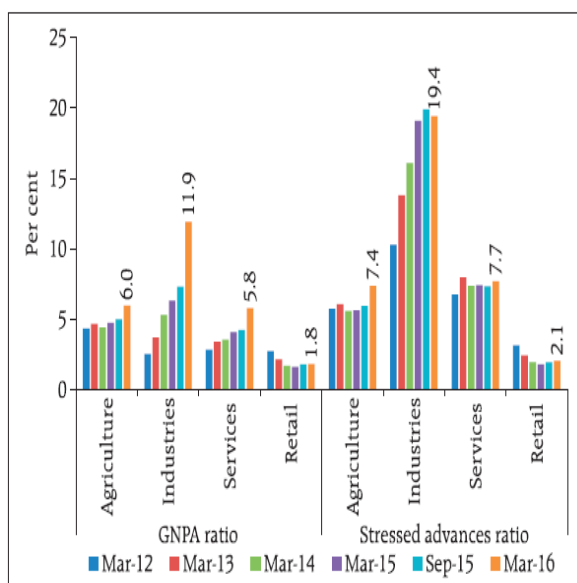
Who are responsible behind such deterioration? Have the banks become more inefficient in recent times? Or, are bank borrowers, of late, going through bad times? Is it effectively a cyclical phenomenon? Such questions are raised. In popular discourse the situation is often seen as a product of Indian variety crony capitalism whereby a coalition of bankers-bureaucrats-politicians-corporates could have generated this unwanted outcome. In fact, there is a larger debate about the desirability (or its lack) of revealing the firm-specific or industry house-specific data on bad debt. Like any major issue in public policy, in this case too, arguments exist on both sides. Illustratively, in a country where farmers routinely commit suicide on account of debt burden, one can legitimately question the lack of enthusiasm of the authorities to publish such data; at the same time one can also be sceptical about the lack of investigative journalism in this regard. On the other hand, it can be argued that when a particular business venture of a business house goes through a bad patch, leading to its inability to pay back bank loans because of some legitimate and secular reasons, publishing such price sensitive information could be a recipe for an overall corporate disaster. After all, historically, the notion of limited liability came up with the motive of ring-fencing one's personal property from the assets of a company.

## **Sectoral Composition**

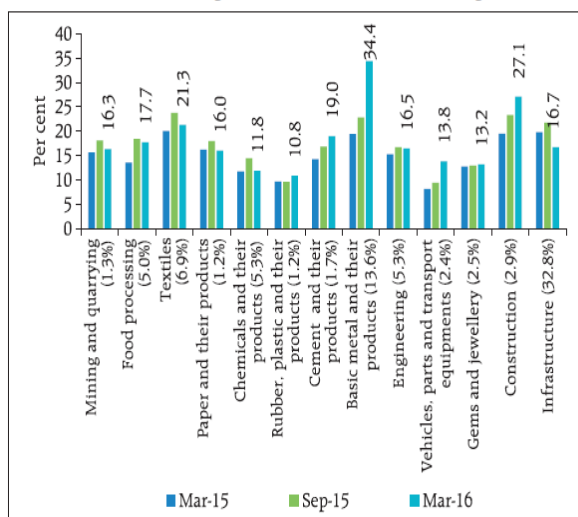
Leaving aside such an issue, in absence of any firm data of industry-group-wise contribution to NPAs, one can only look at some collaborative evidence. What we now know is that small firms or priority sector advances are not responsible behind the NPA mess; and thus, unlike many of our economic malaises, the NPA situation is not an outcome of macroeconomic populism. In fact, bulk of the NPAs have emanated from the industrial sector, in which share of construction, basic metals, infrastructure, and textiles are rather large (Chart 3).

**Chart 3: Sectoral Composition of NPA**

**(A) Asset quality in major sectors (%)**



**(B) Stressed advances ratios of major sub-sectors within industry (% of advances of their respective sector)**



Numbers given in parenthesis with the legend are share of the respective sub-sector’s credit in total credit to industry.

Source: Financial Stability Report, June 2016, RBI

In fact, in terms of size class, much of NPAs that sprang during 2015 are concentrated in the size of Rs 200 million to Rs. 500 million (Chart 4). Apart from the possibility of crony capitalism and laxity on the part of the bankers, several factors seem to be responsible behind such a phenomenon.<sup>3</sup> First, in the aftermath of the global financial crisis, the regulatory forbearance adopted by the Indian authorities could have been too aggressive.<sup>4</sup> Second, in some of the sectors like steel and basic metals the story is part of the global recession and consequent nose-diving of metal demand. Third, in its over-zealous pursuit of infrastructure projects under the PPP model, both the government / banks as well as corporates could have kept the old-fashioned calculations of project viability under the carpet. Finally, in general many of the Indian corporates have taken

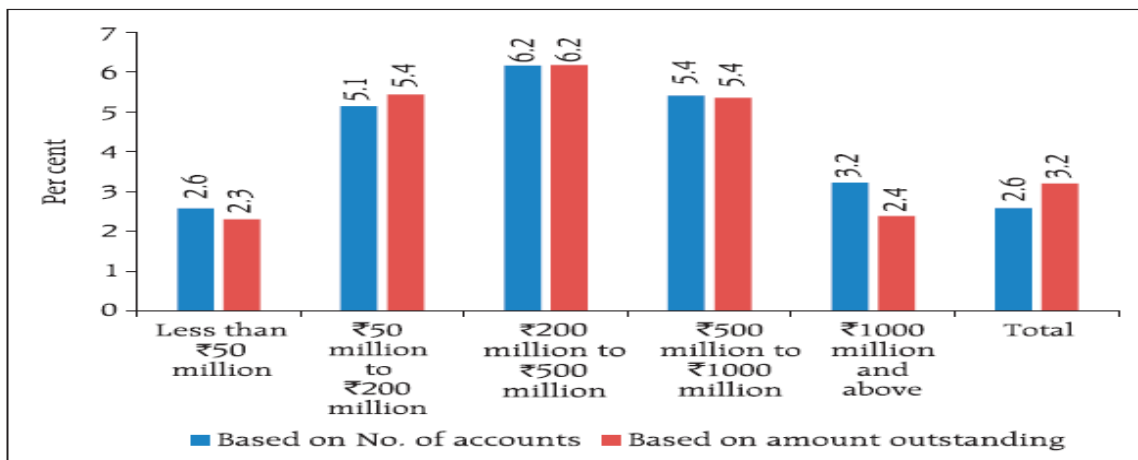
<sup>3</sup> Mohan, Rakesh and Partha Ray (2016): “India’s Financial Sector Reforms 2010-2016: Outcomes And Issues”, presentation at the 17th Annual conference on Indian economic policy, organized by the Stanford Center for International Development (SCID), Stanford University, available at <http://scid.stanford.edu>

<sup>4</sup> Several such measures were introduced. Illustratively, provisioning requirements for most standard assets reduced to a uniform level of 0.40 per cent and risk weights on banks’ exposures to certain sectors revised downward.



the easy route of debt financing; this is reflected in a 2015 Credit Suisse Report on India that noted a seven-fold increase of indebtedness of ten heavily indebted Indian corporates over the last eight years.

**Chart 4 : Slippage of standard accounts to NPA category –Loan size wise (January to December 2015)**



Source: Financial Stability Report, June 2016, RBI

### Recent Initiatives

However, not all is lost. Some efforts to ease the situation are already under way. The RBI has issued guidelines on a ‘Scheme for Sustainable Structuring of Stressed Assets’ (S4A) on June 13, 2016. The S4A scheme "envisages determination of the sustainable debt level for a stressed borrower, and bifurcation of the outstanding debt into sustainable debt and equity/quasi-equity instruments which are expected to provide upside to the lenders when the borrower turns around".<sup>5</sup> The Scheme has been criticized on the ground that promoters are not bringing any assets. In fact, in a recent interview, the RBI Deputy Governor S S Mundra went on to say:

"... These are not the best solutions; these are the second-best solutions. We don't have the best solution in place at this point. Hopefully, it will be put in place. once it comes

<sup>5</sup> RBI Press Release on "RBI introduces a ‘Scheme for Sustainable Structuring of Stressed Assets'", June 13, 2016; available at [https://www.rbi.org.in/Scripts/BS\\_PressReleaseDisplay.aspx?prid=37210](https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=37210)

(Bankruptcy Law), things will be dealt with under that structure. It leaves room for a potential upside and when that comes, the one who has sacrificed more should also gain more."<sup>6</sup>

As part of its *Indradhanush* Proposal of April 2015, Government of India has earlier proposed revamping the public sector banks by infusing capital worth of Rs.70,000 crores out of budgetary allocations for four years - for Rs 25,000 crore in 2015 -16; Rs. 25,000 crore in 2016-17; and Rs 10,000 crore in each of 2017-18 and 2018-19.<sup>7</sup> During 2015-16, 21 public sectors banks got fund support of Rs 25,000 crore; of this, SBI got the highest amount of Rs 5,393 crore followed by Bank of India at Rs 2,455 crore. More recently, the Finance Minister reiterated the government's intention to stick to the declared schedule of capital infusion to public sector banks.

But capital infusion and restructuring is part of the immediate solution. End of the day, if Indian public sector banks want to bring back soundness in their balance sheet, professionalism of the management and freedom from interferences from the government / politicians need to be ensured. Besides, the country needs to have systemic procedure for corporate bankruptcy. Otherwise, this pattern of formation of NPAs and rescuing the public sector banks with tax payers' money becomes a scheme of cross-subsidization of the rich and mighty by the poor and is best avoidable.

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<sup>6</sup>[http://economictimes.indiatimes.com/articleshow/52860383.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](http://economictimes.indiatimes.com/articleshow/52860383.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)

<sup>7</sup> <http://financialservices.gov.in/PressnoteIndardhanush.pdf>

# Restructuring Electricity Distribution Companies:

## The UDAY Scheme

Payal Ghose and N Aparna Raja<sup>‡</sup>

Power has traditionally been the pillar for economic development. Despite its critical role in growth and economic transformation, the Indian power sector has been beset with technical and financial difficulties, with its criticality resulting in several Government bailouts of the sector, the latest of which is the “Ujwal Discom Assurance Yojana” or in other words, the UDAY scheme.

### Structure of power sector in India

The Indian power sector governed by the Ministry of Power (MoP) can be categorized into three arms - Generation, Transmission and Distribution. Actual production of electricity, using diversified sources (ranging from conventional sources like coal, oil, natural gas etc. to non-conventional sources like wind, solar and domestic waste) can be regarded as the Generation segment. Transmission facilitates delivery of electricity through high voltage towers and interconnected lines from a generation plant to the distribution point. Distribution is the final stage in the delivery of electric power through which electricity received at the distribution centers is supplied to retain consumers and businesses via poles and wires.

In India, the Centre and the state governments were constitutionally entrusted to lay down the laws, issue licenses for the development of power supply network and to create State Electricity Board (SEB) in each State (Indian Electricity Act, 1910 and The Electricity (Supply) Act, 1948). Over the years, electricity generation and transmission sectors were opened to the private sector (through an amendment to the 1948 act in 1991 and The Electricity Laws (Amendment) Act 1998). However, distribution remained exclusively in the domain of the States, with few exceptions (e.g., West Bengal). Inefficient planning, lack of investment, over staffing, inadequate maintenance, power theft, non-billing or incorrect billing led to mounting losses to SEBs. Mismatch between tariffs and cost of generating power, delay in increasing tariff rates, below-cost tariffs to different consumer groups, and free electricity to agriculture weakened the finances of state utilities, making distribution sector unappealing for private investments. To address problems faced by the power

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sector especially for the purpose of distancing state governments from tariff determination, the central government, in 1998 passed, the Electricity Regulatory Commissions Act to mandatorily create the Central Electricity Regulation Commission which is designated to set the tariff of centrally controlled generation companies. States too were provided with an option to either set up a commission or function under the existing procedure. Nevertheless, it was only after the enactment of the Electricity Act, 2003, that the power sector underwent significant transformation.

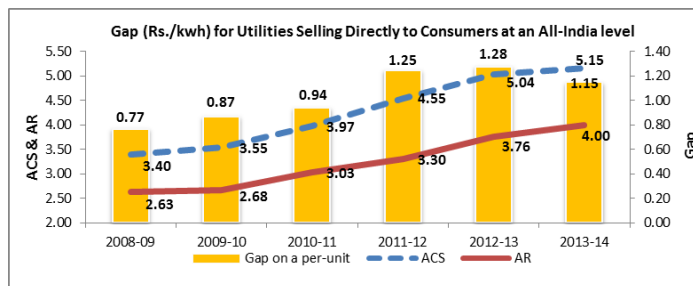
The Electricity Act, 2003 which came into effect from June 02, 2003, replaced some of the previous laws to provide for the development of the power sector as a whole and shift regulated business to competitive business. It is “an Act to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity and generally for taking measures conducive to development of electricity industry, promoting competition therein, protecting interest of consumers and supply of electricity to all areas, rationalization of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies, constitution of Central Electricity Authority, Regulatory Commissions..”

The Accelerated Power Development and Reform Programme (APDRP) which was first contemplated by the Central Government in 2002-03 to improve financial viability of the SEBs, reduce losses, improve quality and availability of power supply was modified further by the XI Plan as Restructured Accelerated Power Development and Reform Programme (R-APDRP). The programme was approved for IT enablement and strengthening of distribution sector through up-gradation for which funds are provided through loans to be converted into grant after achieving certain level of loss reduction.

### **Discoms – The weakest link**

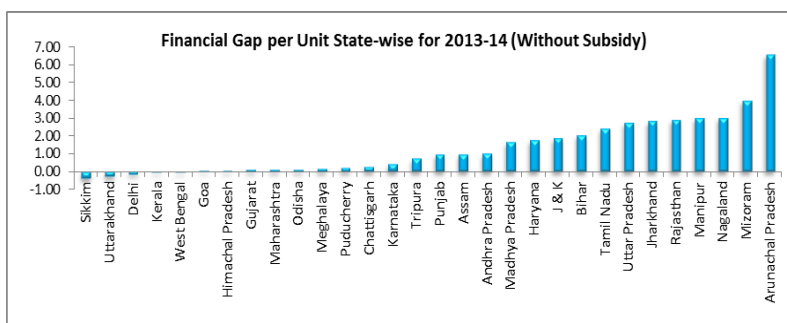
Distribution companies (Discoms) are the intermediaries between generators and the end-users of power which purchase electricity from wholesale markets and provide it to retail customers. Discoms charge a mark-up over their cost of supply to earn return in addition to other income they earn from investments. As Discoms are the backbone for the entire electricity supply chain, their debt overhang is seen as a bottleneck for the sector. The Chart given below shows the financial gap per unit of power in Discoms as a difference between average cost of supply (ACS) and average revenue (AR). Since 2008-09, the gap per unit has been consistently on the rise from Rs.0.77 to Rs.1.18 in 2012-13. During 2013-14, however, the gap reduced marginally to Rs.1.15.

The primary reason for the ever-increasing gap could be non-equivalent increase in tariff in relation to increase in cost of inputs.



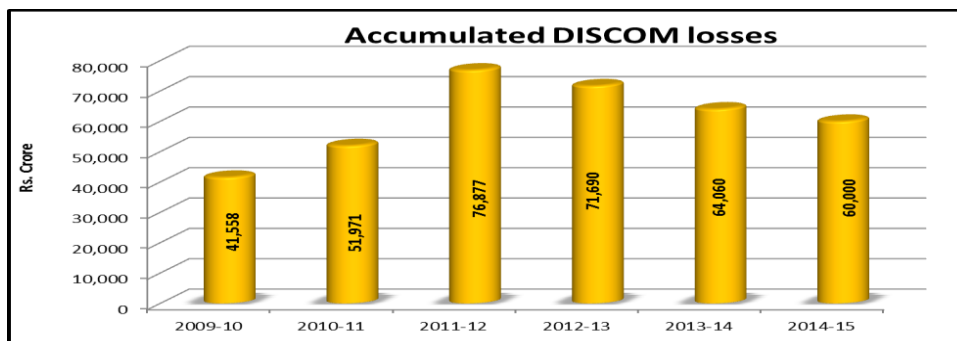
Source: Power Finance Corporation Ltd. Note: Average Cost of Supply (ACS) = Total Expenditure/Total input energy (Kwh); Average Revenue (AR) = Revenue from sale of power (excluding subsidy) + other income/Total input energy (Kwh); Gap = ACS - Average Revenue

Financial gap per unit per state for 2013-14 is illustrated in the following Chart. Out of 30 States, just 5 states, namely, Sikkim, Uttarakhand, Delhi, Kerala and West Bengal, were profit making states without state government subsidies. 11 states had a gap of less than Re.1 per unit, while remaining 14 had a gap of more than Re.1 per unit. It can also be observed that 9 states made up 75% of the total loss per unit during 2013-14.



Source: Power Finance Corporation Ltd.

The deteriorating financial health of distribution companies has become an area of concern. They are caught in a vicious circle with operational losses being funded by debt reducing their ability to buy power to satisfy demand. Delayed and inadequate tariff hikes that are quite below the cost can be termed as the main reason for mounting losses. Apart from this revenue side constraint, there are other factors on the cost side such as failure on part of the states to undertake financial restructuring of Discoms in terms of fixing tariff on a regular basis and setting up of the State Electricity Distribution Responsibility Act, unforeseen cost of fuel, a sharp increase in the use of expensive imported coal last minute, rising interest expenses due to Discoms' increased borrowing to meet cash-flow needs led to escalation in cost that played a crucial role in making finances weak for these companies.



Source: Ministry of Power

Outstanding debt of DISCOMs has increased from about Rs.2.40 lakh crore in 2011-12 to about Rs.4.30 lakh crore in 2014-15, with interest rates up to 14-15% and accumulated losses of approximately Rs.3.80 lakh crore (as on March, 2015).

### Reasons behind Discom losses

<b>Technical losses</b>	Technical losses are caused by power theft, overloading of existing lines due to higher demand for power, non-upgradation of equipment, improper relocation of distribution substations and provisioning for additional distribution transformers in the pipeline.
<b>Commercial losses</b>	Commercial losses arise due to low metering/billing/collection efficiency, causing persistent gaps between ACS and ARR. Furthermore, faulty meters, billing on average consumption basis, delays in revenue collections and unauthorised usage of power by agricultural and rural consumers also contribute to heavy commercial losses.
<b>Rise in subsidy dependence</b>	Delay and nonpayment of subsidies by state governments is a major source of loss for Discoms. These subsidies are meant to be paid to them to compensate for cheaper power supplies to certain segments promised by the state governments. In particular, the subsidy burden for distribution companies is estimated to have increased due to higher costs and cheaper tariff for the farm sector.
<b>Under pricing and reporting lags</b>	Selling prices have been historically set significantly lower than the procurement price for electricity, influenced by the political agenda of state governments. Furthermore, Discoms release their financial results with a considerable lag, which complicates the assessment of their financial viability by potential lenders.
<b>Power in concurrent list</b>	Electricity is a concurrent subject under the purview of states; as a result, oversight of Discoms is the domain of state governments. Consequently, it is difficult for the Central Government to reform Discoms directly.
<b>Reduction in Power Purchase Agreements (PPAs)</b>	The lower energy requirement of Discoms due to their fragile financial health has resulted in fewer PPAs. Going forward, signing of new PPAs will depend on the ability of Discoms to enter into long term commitments. This implies that in the short term market, electricity generating companies will continue to remain exposed to volatile prices.

Source: RBI "State Finances: A Study of Budgets of 2015-16"

### Vision for power sector

Revamping power distribution has now become one of the priorities for the government to achieve its ambitious "Power for All" goal as weakness in Discoms results in cascading effect on other

sub-sectors of electricity supply. The Government announced several policy actions on distribution front as listed in the Economic Survey 2015-16, including:

<p><b>A. Ujwal DISCOM Assurance Yojana (UDAY)</b> - States shall take over 75% of Discom debt outstanding as of September 2015, reduction of Aggregate Technical &amp; Commercial (AT&amp;C) losses to 15% and decrease in Gap (cost – revenue) by 2018-19, increased supply of domestic coal to substitute for imported coal, prohibition to avail short term debt from banks for financing losses.</p> <p><b>B. Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)</b> - Electrification of all villages, reduction in losses by metering of unmetered connections, separation of feeders to ensure sufficient electricity to agriculture and continuous supply to other categories and improvement of sub-transmission and distribution network to improve the quality and reliability of supply.</p> <p><b>C. Integrated Power Development Scheme (IPDS)</b> - Strengthening of sub-transmission and distribution network, metering of distribution transformers/feeders/consumers in urban areas, IT enablement of distribution sector and strengthening of distribution network.</p> <p><b>D. Domestic Efficient Lighting Program (DELP)</b> - 77 crore LED bulbs to replace household and street light incandescent bulbs.</p> <p><b>E. National Tariff Policy, 2016</b> – Revision of Cross subsidy surcharge formula and planning by regulator to supply power 24X7 to all consumers latest by 2021-22 or earlier.</p>
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## The UDAY Scheme

The Union Cabinet approved the UDAY scheme on November 5, 2015 for the financial turnaround and revival of Discoms and ensure a sustainable solution to the problem of distribution losses.

## Features of UDAY Scheme

State Takeover of Discom Debt	Debt takeover mechanism	UDAY Bonds	Treatment of residual debt	Future Discom financing
Scheme available only for State Discoms including combined generation, transmission and distribution undertakings	Debt of Discom will be taken over in the priority of debt already due, followed by debt with highest cost.	Non-SLR bonds issued by States shall have maturity period of 10-15 years with a moratorium on repayment of principal up to 5 years, as required by the State.	Up to 25% of the grant can be given as equity where the Discom requires equity support.	Bank/FIs henceforth cannot advance short term debt to Discoms for financing losses.
States shall take over 75% of Discom debt as on September 30, 2015. Debt shall be taken over as: 2015-16 – 50% 2016-17 – 25%	Transfer to Discom by State will be as grant with an option to spread the grant over three years (MoP can further relax by 2 years for high debt States).	10 year Bond Pricing: The 10 year UDAY bonds would be priced at the 10 year G-sec + 0.50% spread for 10 year SDLs + 0.25% spread for non-SLR status on semi-annual compounding basis, or market determined rate, whichever is lower. This may be further reduced if the interest is paid on monthly basis.	Discom debt to be taken over by the State will include Discom bonds which are committed to be taken over by the State as part of FRP 2012 including bonds already taken over in 2015-16.	Working capital loans from Bank/FIs will only be allowed up to 25% of the Discom's previous year's annual revenue.

Discom debt is de facto borrowing of States which is not counted in de jure borrowing. Principal debt taken over will not be included in fiscal deficit of States. However, interest has to be serviced within FRBM limits.	States will issue non-SLR including SDL bonds in the market or directly to the respective banks /Financial Institutions (FIs) holding the Discom debt to the appropriate extent. Proceeds shall immediately be transferred by the States to the Discoms, which in turn shall discharge the corresponding amounts of Bank/FIs debt.	Bonds to be issued against the loans of Fis, including REC and PFC, would first be offered for subscription by the market including pension and insurance companies. Balance, if any, would be taken over by banks in proportion to their current lending to Discoms.	For amount transferred as loan, the interest rate payable by the Discoms to the State for the intervening period shall not exceed the rate of interest on the bonds issued by the State.	States shall take over the future losses of Discoms in a graded manner. <table border="1" data-bbox="1101 149 1411 317"> <tr> <td>FY16</td> <td>0% of the loss of FY15</td> </tr> <tr> <td>FY17</td> <td>0% of the loss of FY16</td> </tr> <tr> <td>FY18</td> <td>5% of the loss of FY17</td> </tr> <tr> <td>FY19</td> <td>10% of the loss of FY18</td> </tr> <tr> <td>FY20</td> <td>25% of the loss of FY19</td> </tr> <tr> <td>FY21</td> <td>50% of the loss of FY20</td> </tr> </table>	FY16	0% of the loss of FY15	FY17	0% of the loss of FY16	FY18	5% of the loss of FY17	FY19	10% of the loss of FY18	FY20	25% of the loss of FY19	FY21	50% of the loss of FY20
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FY20	25% of the loss of FY19															
FY21	50% of the loss of FY20															
Operationalized through a tripartite agreement amongst the Ministry of Power, State Government and the Discom.	Banks/FIs shall not levy any prepayment charge on the Discom debt.		Residual Discom debt to be converted into bonds to be offered to market at a likely rate of State Bond + 0.20%. If not converted into bonds, Banks can lend at interest rate not higher than Banks' Base rate + 0.10%.	Loss financing after October 1, 2015 only as per loss trajectory finalized by States with MoP and only through SDLs or Discom bonds backed by State guarantee.												
UDAY is optional for all States.	Banks/FIs will waive any unpaid overdue or penal interest on the Discom debt and refund/adjust any such overdue/penal interest paid since October 1, 2013.		Half of residual debt shall be taken over by the State by 2016-17. States shall guarantee repayment of principal and interest payment for balance debt remaining with Discoms/ bonds issued by Discom.													

Source: Ministry of Power, Coal and New & Renewable Energy

## Expectations from the scheme

The UDAY scheme will not only serve at improving the financials of Discoms, it will also account for huge capital savings for the Indian banking sector, especially the Public Sector Banks which have maximum exposure to the power sector. The UDAY scheme rather than being a scheme doling out free funds without accountability is more of an attempt at financial restructuring for all the parties involved – the States, Discoms and their creditors. It is essentially a mechanism of converting outstanding Discom debt to tradable instruments rather than NPAs, thus, freeing up further funding channels. This will reduce the financial pressure on the Discoms and the resultant reduction in the cost of power can be passed on to the final consumers. Discoms will be forced to improve their operational efficiency to avail further financing. UDAY comes with strict budgetary constraints, provisions for monitoring by Central teams and binding operational milestones for the State governments and Discoms. Operational efficiency improvements like compulsory smart metering, upgradation of transformers, meters etc., energy efficiency measures like efficient LED bulbs, agricultural pumps, fans & air-conditioners etc. will reduce the average AT&C loss from



around 22% to 15% and eliminate the gap between Average Revenue Realized (ARR) & ACS by 2018-19. Reduction in cost of power would be achieved through measures such as increased supply of cheaper domestic coal, coal linkage rationalization, liberal coal swaps from inefficient to efficient plants, coal price rationalization based on GCV (Gross Calorific Value), supply of washed and crushed coal, and faster completion of transmission lines. NTPC alone is expected to save Rs.0.35/unit through higher supply of domestic coal and rationalization/swapping of coal which will be passed on to Discoms/consumers.

The UDAY scheme will force fiscal prudence on the part of the States as it requires them to absorb a part of future losses of the Discoms while providing for the cost of servicing their subsidies in their Budgets. Financial liabilities of Discoms are the contingent liabilities of the respective States and need to be recognized as such. States shall take over 75% of Discom debt as on September 30, 2015 over two years - 50% of Discom debt shall be taken over in 2015-16 and 25% in 2016-17. This will reduce the interest cost on the debt taken over by the States to around 8-9%, from as high as 14-15%; thus improving overall efficiency. Further provisions for spreading the financial burden on States over three years, will give States flexibility in managing the interest payment on the debt taken over, within their available fiscal space in the initial few years. A permanent resolution to the problem of Discom losses will be achieved by States taking over and funding at least 50% of the future losses (if any) of Discoms in a graded manner. It also provides incentives for performing states.

### Benefits of UDAY

Government	Industry & Consumers	Banks & Investors	Additional Benefits for States	Discoms
Achievement of 24X7 Power for All	Availability of 24X7 power improving quality of life and efficiency	Avoid banking contagion (Rs.40,000 crore of repayments due to banks in 2015-16) which will create significant NPAs	States accepting the scheme and performing as per operational milestones will be given additional/ priority funding through DDUGJY, IPDS, Power System Development Fund (PSDF) or other such schemes of MoP and MNRE	Enabling quarterly tariff increase to mitigate cost increase burden
Power to 5 crore households without electricity	Lower cost of power -Typical 3,000 MW NTPC plant running at 60% Plant Load Factor (PLF) has a fixed cost of Rs.2.67/unit, vs	Lower risk for existing investments and loans in power, coal and renewables sector	Such States shall also be supported with additional coal at notified prices and, in case of availability through higher capacity utilization, low cost power from NTPC and other Central Public Sector Undertakings (CPSUs)	Operational efficiency

	Rs.1.80 at 90% PLF			
Speedy achievement of electrification of remaining 18,500 villages	Global competitiveness of industry	Lower capital adequacy provisions as direct exposure to state governments would attract 0% risk-weight, compared to 20% for state government guaranteed exposure to Discoms, thus freeing up substantial amount of risk-weighted capital. The remaining Discom loans would attract lower provisioning as they would be classified as standard		Lower cost of power
Energy security through coal and renewables		Increased procurement of power by Discoms revives existing power projects suffering from low PLFs		Reduction in interest cost
Reduce Current Account Deficit (CAD) from higher diesel import (current annual imports of around Rs.50,000 crore)		Reduces investment uncertainty across the sector		Opportunity to break even in the next 2-3 years
Meet ambitious renewable energy commitments as a responsible global citizen				Enforcing financial discipline through alignment with State finances
Revive investments in power sector to create jobs				Future bank lending channels opened

*Source: Ministry of Power, Coal and New & Renewable Energy*

## **UDAY- Issuance Mechanism**

In March 2016, RBI asked for bids from market participants interested in subscribing to the UDAY bonds through private placement route. Given non-SLR status by RBI, these securities were issued by eight State Governments under the Government Securities Act, 2006 and are eligible for market repo.

## State-wise issuance of UDAY Bonds during 2015-16 (Rs. Crore)

Sr. No.	States	Bonds issued (Face Value)	Average Coupon of Issue
1	Rajasthan	37,349.77	8.35
2	Uttar Pradesh	24,332.47	8.55
3	Haryana	17,300.00	8.21
4	Punjab	9,859.72	8.51
5	Jharkhand	5,553.37	8.51
6	Jammu & Kashmir	2,140.00	8.51
7	Bihar	1,554.52	8.51
8	Chhattisgarh	870.12	8.54
	<b>Total</b>	<b>98,959.97</b>	

Source: RBI, CCIL

### Profile of UDAY bonds issued in 2015-16

UDAY bonds have added substantially to the future debt liabilities of the participating States for the next decade and a half. The near-term liability for these bonds is the highest for Rajasthan, which also has the highest proportionate share of UDAY bonds in total debt.

### Maturity Profile of UDAY Bonds (Face Value in Rs. Crore)

FY/State	Rajasthan		Uttar Pradesh		Haryana		Punjab		Jharkhand		Jammu & Kashmir		Bihar		Chhattisgarh		Total	
	Face Value	% Share in Outstanding	Face Value	% Share in Outstanding	Face Value	% Share in Outstanding	Face Value	% Share in Outstanding	Face Value	% Share in Outstanding	Face Value	% Share in Outstanding	Face Value	% Share in Outstanding	Face Value	% Share in Outstanding	Face Value	% Share in Outstanding
2017-18	4150	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4150	19
2018-19	4150	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4150	11
2019-20	4150	35	2028	12	-	-	-	-	-	-	-	-	-	-	-	-	6178	13
2020-21	4150	39	2028	13	-	-	-	-	-	-	-	-	-	-	-	-	6178	15
2021-22	4150	47	2028	11	3460	35	986	10	555	31	214	7	155	4	87	100	11635	21
2022-23	4150	33	2028	16	3460	27	986	9	555	13	214	9	155	2	87	5	11635	18
2023-24	4150	31	2028	18	3460	23	986	10	555	16	214	9	155	2	87	3	11635	18
2024-25	4150	25	2028	10	3460	23	986	16	555	10	214	13	155	2	87	2	11635	15
2025-26	4150	21	2028	6	3460	20	986	8	555	9	214	9	155	1	87	2	11635	11
2026-27	-	-	2028	20	-	-	986	33	555	100	214	100	155	100	87	100	4025	26
2027-28	-	-	2028	66	-	-	986	100	555	100	214	100	155	100	87	100	4025	75
2028-29	-	-	2028	66	-	-	986	100	555	100	214	100	155	100	87	100	4025	38
2029-30	-	-	3340	100	-	-	986	100	555	100	214	100	155	100	87	100	5338	100
2030-31	-	-	715	100	-	-	987	100	555	100	214	100	155	100	87	100	2714	100
<b>Total</b>	<b>37350</b>	<b>31</b>	<b>24332</b>	<b>14</b>	<b>17300</b>	<b>21</b>	<b>9860</b>	<b>12</b>	<b>5553</b>	<b>19</b>	<b>2140</b>	<b>10</b>	<b>1555</b>	<b>3</b>	<b>870</b>	<b>6</b>	<b>98960</b>	<b>17</b>

Source: CCIL (SDLs Outstanding as of May 31, 2016)

UDAY bonds have been issued at multiple maturities to suit the appetite of various investor groups. The higher yields compared to the central government securities is expected to attract investments. In general, Uttar Pradesh has had to offer the highest yields for these bonds.

### Coupon Profile of UDAY Bonds issued in 2015-16 (%)

FY/State	Rajasthan	Uttar Pradesh	Haryana	Punjab	Jharkhand	Jammu & Kashmir	Bihar	Chhattisgarh
2017-18	8.35	-	-	-	-	-	-	-
2018-19	8.35	-	-	-	-	-	-	-
2019-20	8.35	8.32	-	-	-	-	-	-
2020-21	8.35	8.50	-	-	-	-	-	-
2021-22	8.35	8.60	8.21	8.51	8.53	8.53	8.53	8.55
2022-23	8.35	8.52	8.21	8.45	8.45	8.45	8.45	8.48
2023-24	8.35	8.56	8.21	8.48	8.50	8.50	8.50	8.53
2024-25	8.35	8.52	8.21	8.50	8.50	8.50	8.50	8.50
2025-26	8.35	8.30	8.21	8.22	8.22	8.22	8.22	8.27
2026-27	-	8.64	-	8.44	8.45	8.45	8.45	8.64
2027-28	-	8.72	-	8.65	8.65	8.65	8.65	8.67
2028-29	-	8.48	-	8.48	8.48	8.48	8.48	8.46
2029-30	-	8.69	-	8.62	8.62	8.62	8.62	8.60
2030-31	-	8.79	-	8.72	8.72	8.72	8.72	8.70
Total	8.35	8.55	8.21	8.51	8.51	8.51	8.51	8.54

Source: CCIL

Despite the worsening in their fiscals, most States managed to issue the UDAY bonds at lower coupons than their existing securities for the respective tenors, primarily as a result of the rally in the benchmark 10-year central government bond following the Budget, which was the basis for the pricing of these bonds. As a result States such as Rajasthan were able to issue UDAY bonds at coupons lower than the cut-offs in the primary auctions for their 10-year SDLs.

## Average Coupon Non-UDAY SDLs (%) and Spread of UDAY Bonds (bps)

FY/State	Rajasthan		Uttar Pradesh		Haryana		Punjab		Jharkhand		Jammu & Kashmir		Bihar		Chhattisgarh	
	Coupon	Spread	Coupon	Spread	Coupon	Spread	Coupon	Spread	Coupon	Spread	Coupon	Spread	Coupon	Spread	Coupon	Spread
2017-18	8.22	13	8.19	-	8.78	-	8.22	-	7.91	-	8.55	-	8.25	-	-	-
2018-19	7.67	68	8.43	-	7.74	-	8.04	-	7.62	-	8.42	-	7.83	-	-	-
2019-20	8.09	26	8.22	10	8.21	-	8.35	-	8.02	-	7.95	-	8.21	-	8.25	-
2020-21	8.32	2	8.39	11	8.43	-	8.44	-	8.28	-	8.44	-	8.50	-	-	-
2021-22	8.95	-60	8.82	-22	8.73	-52	8.64	-13	8.89	-36	9.12	-59	8.85	-32	-	-
2022-23	8.83	-48	8.91	-40	8.81	-60	8.90	-45	8.76	-31	8.83	-38	8.85	-40	8.65	-17
2023-24	8.96	-61	8.62	-5	9.27	-106	8.93	-45	9.46	-96	8.72	-22	9.50	-100	8.76	-23
2024-25	8.65	-30	8.48	4	8.32	-11	8.75	-26	8.13	37	8.94	-44	8.26	24	8.56	-6
2025-26	8.25	9	8.31	-1	8.30	-9	8.23	-1	8.43	-21	8.30	-8	8.48	-26	8.28	-1
2026-27	8.07	-	8.09	55	-	-	7.98	46	-	-	-	-	-	-	-	-
2027-28	8.57	-	8.62	10	-	-	-	-	-	-	-	-	-	-	-	-
2028-29	9.53	-	8.47	1	-	-	-	-	-	-	-	-	-	-	-	-
2029-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2030-31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>8.48</b>	<b>-9</b>	<b>8.24</b>	<b>2</b>	<b>8.59</b>	<b>-47</b>	<b>8.08</b>	<b>-14</b>	<b>7.67</b>	<b>-30</b>	<b>8.18</b>	<b>-34</b>	<b>8.43</b>	<b>-35</b>	<b>8.16</b>	<b>-12</b>

Source: CCIL

### Impact on Primary Market

Overall indebtedness of States has been on an upward trajectory, especially during the last financial year when market borrowings jumped more than 22% over the previous fiscal. While the RBI was able to conduct market borrowing operations in a smooth manner without undue disruptions, the apprehensions about the incremental supply of state bonds due to the UDAY issuances led to the hardening of the cut-offs in the SDL auctions in the last quarter of 2015-16. Lack of clarity on the RBI provisions regarding the bonds also added to the negativity made especially severe due to the prevailing liquidity tightness. The increased supply was also blamed for the lack of FPI interest in SDLs despite enhancement of limits on fears of supply outstripping demand. The market received some support after the RBI clarified that the UDAY bonds would be issued on private placement basis and could be considered for classification under the held-to-maturity (HTM) category.

### Primary Market Borrowings (10-year SDL) (Rs. Crore)

Month/State	Rajasthan	Uttar Pradesh	Haryana	Punjab	Jharkhand	Jammu & Kashmir	Bihar	Chhattisgarh
Apr-15	1000	4000	-	1000	-	-	-	-
May-15	1000	2000	1900	900	-	500	-	-
Jun-15	1000	2000	1000	600	-	-	-	-
Jul-15	1000	2000	1900	600	1000	500	-	700
Aug-15	-	1000	1000	1500	-	450	-	-
Sep-15	500	2000	2000	1300	-	-	2000	-
Oct-15	1750	3000	-	1500	500	-	1500	-
Nov-15	2250	2000	800	500	1000	300	-	800
Dec-15	-	1500	1900	600	500	150	-	1500

Jan-16	3000	4000	1100	300	500	-	-	700
Feb-16	1800	5000	2500	1000	1850	350	5000	-
Mar-16	2500	1500	-	1000	-	-	3000	1150
<b>2015-16</b>	<b>15800</b>	<b>30000</b>	<b>14100</b>	<b>10800</b>	<b>5350</b>	<b>2250</b>	<b>1150</b> <b>0</b>	<b>4850</b>
Apr-16	750	2400	-	1200	-	-	-	-
May-16	750	4500	-	800	-	-	-	-

Source: CCIL

While the investors were able to lock in higher yields, the interest costs for the borrowers were higher despite a downward trajectory in policy rates. Impact of the UDAY issuances was observable with investors differentiating between states based on their fiscal position and the quantum of losses accumulated by their Discoms. Yields started declining post RBI's clarifications.

### Primary Market Cut-offs (10-year SDL) (%)

Month/State	Rajasthan	Uttar Pradesh	Haryana	Punjab	Jharkhand	Jammu & Kashmir	Bihar	Chhattisgarh
Apr-15	8.05	8.09	-	8.05	-	-	-	-
May-15	8.29	8.27	8.21	8.32	-	8.18	-	-
Jun-15	8.22	8.20	8.22	8.27	-	-	-	-
Jul-15	8.29	8.31	8.29	8.34	8.30	8.30	-	8.32
Aug-15	-	8.28	8.29	8.26	-	8.28	-	-
Sep-15	8.23	8.20	8.20	8.22	-	-	8.17	-
Oct-15	7.97	7.99	-	8.01	7.98	-	7.99	-
Nov-15	8.15	8.16	8.15	8.14	8.17	8.17	-	8.19
Dec-15	-	8.23	8.27	8.24	8.25	8.26	-	8.23
Jan-16	8.33	8.37	8.38	8.31	8.42	-	-	8.32
Feb-16	8.56	8.68	8.51	8.56	8.82	8.63	8.68	-
Mar-16	8.27	8.58	-	8.17	-	-	8.60	8.35
Apr-16	7.98	8.02	-	7.97	-	-	-	-
May-16	8.00	8.03	-	8.00	-	-	-	-

Source: CCIL

## Impact on Secondary Market

SDL yields spiked in January-February 2016 as the market, already apprehensive due to the enhanced State borrowings through incremental supply of SDLs, waited for clarity on the UDAY issuances.

### Secondary Market Yields of SDLs >9 year (%)

Month/State	Rajasthan	Uttar Pradesh	Haryana	Punjab	Jharkhand	Jammu & Kashmir	Bihar	Chhattisgarh
Apr-15	8.12	8.07	8.03	8.10	8.08	-	8.12	-
May-15	8.17	8.20	8.18	8.24	8.22	8.16	8.16	-
Jun-15	8.21	8.24	8.22	8.24	8.25	8.24	8.28	8.29
Jul-15	8.24	8.26	8.24	8.30	8.29	8.22	-	8.31
Aug-15	8.23	8.20	8.26	8.23	8.21	8.28	8.24	8.21
Sep-15	8.25	8.18	8.19	8.20	8.18	8.23	8.17	8.20
Oct-15	8.01	7.98	7.97	7.98	7.96	-	7.97	7.96
Nov-15	8.12	8.14	8.10	8.12	8.14	-	8.08	8.16
Dec-15	8.18	8.20	8.22	8.16	8.18	8.26	-	8.21
Jan-16	8.30	8.33	8.33	8.24	8.40	-	-	8.30
Feb-16	8.59	8.63	8.49	8.40	8.68	8.75	8.62	8.34
Mar-16	8.29	8.46	8.17	8.22	8.33	8.12	8.46	8.43
Apr-16	8.04	8.04	8.01	8.06	8.06	-	8.06	8.03
May-16	8.02	8.02	8.03	8.03	8.04	8.03	8.05	8.03

Source: CCIL. Excluding Special Bonds

Commensurate to the spike in yields of SDLs, spreads over g-secs also rose during the last quarter of 2015-16, peaking in February 2016, and declining thereafter throughout March as the market got increased clarity from the RBI over the implementation of the scheme.

## Secondary Market Spread of SDLs >9 year (bps)

Month/State	Rajasthan	Uttar Pradesh	Haryana	Punjab	Jharkhand	Jammu & Kashmir	Bihar	Chhattisgarh
Apr-15	30	26	21	28	24	-	28	-
May-15	24	26	29	29	29	36	26	-
Jun-15	29	28	30	29	24	27	28	24
Jul-15	30	32	29	31	34	29	-	38
Aug-15	30	32	30	33	32	35	34	30
Sep-15	36	34	32	33	31	39	32	34
Oct-15	33	28	30	27	30	-	29	29
Nov-15	31	32	30	31	32	-	34	32
Dec-15	30	31	32	29	29	31	-	31
Jan-16	54	55	56	41	62	-	-	53
Feb-16	63	71	63	55	75	70	71	53
Mar-16	55	65	47	49	57	39	66	63
Apr-16	43	43	44	39	45		44	40
May-16	41	41	41	42	39	39	44	42

Source: CCIL. Excluding Special Bonds

Despite the initial negativity in the market over the non-SLR status of these bonds, they have found sufficient liquidity in the secondary market – both outright and market repo segments unlike power bonds issued earlier by States. The share of UDAY bonds in total trading of SDLs during April-May 2016 was almost 32% in the outright and a substantial 68% in the repo segment.

## Trading Summary UDAY Bonds in 2016-17

State	Outright			Repo		
	Trades	Value (Rs. Cr)	% Share in Total SDL	Trades	Value (Rs. Cr)	% Share in Total SDL
Rajasthan	218	2208.65	3.25	146	15700.00	32.65
Uttar Pradesh	121	1173.46	1.73	-	-	-



<b>Haryana</b>	8	42.75	0.06	66	11825.00	24.59
<b>Punjab</b>	905	9864.30	14.52	81	3500.00	7.28
<b>Jharkhand</b>	47	329.23	0.48	-	-	-
<b>Jammu &amp; Kashmir</b>	233	1979.00	2.91	-	-	-
<b>Bihar</b>	77	668.48	0.98	99	3962.00	8.24
<b>Chhattisgarh</b>	120	860.33	1.27	17	960.00	2.00
<b>Total</b>	<b>1729</b>	<b>17126.20</b>	<b>25.21</b>	<b>409</b>	<b>35947.00</b>	<b>74.76</b>

Source: CCIL

NBFCs followed by Mutual Funds have been the most active participants in secondary outright market for UDAY bonds. However, in terms of net activity, Provident Funds have been the most active buyers with Insurance companies being a distant second. Public Sector Banks have been the most active sellers.

## Conclusion

UDAY is being projected by the government as a shining example of the utilization of the best principles of cooperative and competitive federalism. The journey so far for the UDAY bonds has been relatively smooth sailing as investors have gained appetite for these bonds, with default risk akin to SDLs, in a bid to lock in higher yields. The improvement in the financials of the Discoms, on the other hand, is expected to help overcome the critical hurdle in the government's ambitious goals for the power sector.

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GUEST COLUMN

# Revival of Profitability of Indian Corporates: Will it Happen?

## Deep N Mukherjee



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At least for the last two years several analysts have been predicting a strong revival in earnings growth of Indian corporates. However the earnings growth in FY16 has been anaemic and elusive. The aggregated EBITDA earnings of BSE500 (Excluding Banks and financial Services) and also BSE200 have shown a marginal uptick in FY16 over FY15 levels. However it is not close to the fantastic growth rate of 12%-15% that has been doing the rounds for last couple of years. However most analysts usually focus on PAT. The aggregated growth rate of PAT is lower than that of EBITDA.

The more popular reasons for this uptick in earnings, in the recent past, are fall in commodity prices benefitting input costs of corporates as well as low base of previous years. However one reason that is often missed is that the market index of corporates usually have positive selection bias. To elaborate, companies which have significantly lost their market capitalisation were periodically removed from the index and their place was taken by companies with better performance. Thus if one is tracking the earnings growth(y-o-y) of any stock market index by considering the earnings of the corporates which are part of the index at that point of time, it is possible that the earnings growth may appear better. Ideally to track the earnings trend one may have to consider the same set of companies over time. One possible way may be that if one is tracking aggregated earnings growth for a five year period one may consider taking the corporate in index three years back and monitor their earnings performance. This may control for the positive selection bias in market index. It may be noted that considering the latest constituents of market index and tracking the earnings for the same companies for the past five years may not fully eliminate the positive selection bias.

A common approach, at least, in Indian markets is to take a set of companies and perform a bottom up analysis ie; expected earnings growth of each of the companies are first predicted and then rolled up to predict the aggregate earnings growth of a group of companies. Nothing per se wrong with this approach. Even in bleak economic scenarios it is possible to find a handful companies whose earnings growth will be much higher than other companies. However, the criticism of this approach of aggregate earnings growth prediction is that such approaches do not, explicitly and methodologically, consider macro-economic factors. Neglecting these macro factors while modelling the future aggregate earnings growth may be one of the reasons, why the aggregate earnings prediction has been way off the mark in most instances.

### **Macro-Economic Framework for Aggregate Earnings Predictions:**

The anaemic earnings growth of Indian corporates may be better explained by a framework known as *Kalecki Levy Profit Equation* (KLPE). This possibly is the only equation, discovered way back in early 1900, which explicitly connects and explains aggregate corporate profit in terms of macro-economic variables. Unfortunately and surprisingly, most macro-economic text books as well as books on investment management do not even make passing reference to KLPE. This equation is more on the lines of an identity and has been found to have a high success rate in predicting corporate earnings across a wide variety of economies and at various points in the business cycle.

The relationship between aggregate corporate earnings and macroeconomic variables were first recognised by Jerome Levy. Levy, as the story goes, sold his stock holdings in 1929 just before the US stock market tanked. The analytical basis for his decision was provided by the above referred equation. However, credit goes to polish economist Michal Kalecki, who in 1930s, independently rediscovered the relationship. Further his explanation and derivation of the identity contributed significantly to broaden the appeal and usage of the equation.

KLPE is expressed as follows:

Aggregate Corporate Profits (in an economy) equals(=) Investment *less* Foreign Savings *less* Household Savings *less* Government Savings *add* Dividends *add* Corporate profit tax. So as per KLPE the aggregate Corporate Profits will increase as economy-wise Investment (in real assets) increases; similarly if more Foreign Savings come into the economy in the form of spend (export income) or foreign investment it increases corporate profits. If households start saving more, which is consume less, it will drag corporate profits. Less intuitive may be the aspect that increase in government savings (i.e.; reduction of government's fiscal deficit) adversely affects corporate profits,

which is to say what is good for government balance sheet may not be good for private corporate's balance sheets. Likewise dividend and corporate taxes of the equation may appear counter-intuitive at first glance. So let's take a look at KLPE in more details.

### **The Ground Rules:**

Let's start with a simplistic economy with just two sectors, businesses and households. Businesses supply goods and services which are purchased by households and other businesses. Households provide labour to business and earn wages. Households are also consumers and help businesses generate revenues and earn profit. In this hypothetical closed economy, the total income of the business (corporate profit) and the household (wage) is equal to the total expense of the business (investment) and the expenses of household (consumption). So, Corporate Profit + household wage = Corporate Investment + Household Consumption. Acknowledging that for the household sector, wage net of consumption is household savings, the above equation becomes: Corporate Profit = Corporate Investment + Household Consumption – Household Wage. So Corporate Profit = Corporate Investment – Household Savings. If the economy-wide, businesses do not invest in physical asset creation, the investment's contribution to aggregate corporate profit is zero. In such a situation, even if households spend their entire wages on consumption, there is zero household saving and, thus, incremental profit still remains zero.

### **How Investment gives 'Birth' to Profit:**

Investment leads to creation of physical assets which did not exist previously. When a firm buys an asset, in the year of purchase there is hardly any revenue expense for the buyer. In the process of buying, one form of asset (cash) gets converted to another (plant and machinery). Subsequent to purchase, expense arises as depreciation attributable to the economic aspect of the asset's value erosion, owing to wear and tear. For the firm selling the asset the selling price includes the profit for the seller firm. The investment transaction between the buyer firm and the seller firm not only created investment but also 'gave birth to' profit in the economy, which otherwise would not have been there during that period. The bumper profits enjoyed by the Indian corporate sector during the period FY05 to H1FY09 were driven mostly by investments created in the economy.

Currently the investment growth in India is quite discouraging on the private corporate side and most investment in the economy is driven by government. However, historically private investment has been the bulk of the investment in India. Given this, the current investment level is unlikely to give a boost to aggregate corporate profit.

### **The Karma of Corporate Short-Term Decisions:**

Corporate actions that may be driving short-term profitability of one firm, if adopted by all firms in the economy may be detrimental to the overall profitability of the corporate sector. For example a firm may decide to boost its profits by reducing wage outflow and/or raw material consumption. This very 'reasonable decision' if replicated by all firms in the economy, would start restricting profitability possibly more and for a longer period of time than the short term benefit of cost savings. This is because as overall wages in the economy is constrained, consumption will fall, corporate revenue growth will be muted, systemic capacity utilisation starts signalling overcapacity, thereby slowing capital investment in the economy. Similarly, raw material suppliers are themselves firms. If their users reduce raw material purchase, then the revenue of raw material suppliers will fall. Thus a vicious downward cycle of overall low corporate revenue growth and constrained profitability arises because of an otherwise 'sensible' (from a micro perspective) decision of cutting cost at a firm level.

For the business sector, the aggregate profit net of corporate profit tax and dividend of all corporates is a measure of corporate savings. Given that savings are the accumulation of wealth, corporate savings represent the corporate sector's ownership on incremental wealth created in the economy during that period. Thus at a firm level, distributing dividend or paying taxes tends to reduce the wealth of the firm.

But if one broadens the argument to an economy-wide level, then the aggregate dividend paid by all firms in the economy will provide more spending power to their shareholders. These shareholders would then be able to spend more on goods and services. This will add to the revenue of the business segment within the economy.

Similarly, higher corporate tax outflow may be detrimental to a specific firm in that time period, but it will provide more spending power to the government, which may then be used for capital expenditure and other consumption related spending. Of course a government can always create money to spend in the economy. If the government does spend, then this would benefit the overall revenue and profitability of the business sector.

### **The Household Decision and Corporate Profit:**

In the current scenario in India where corporate, particularly private corporate investment is somewhat muted, what may possibly boost corporate profit? One of the drivers of corporate

profitability can be household dissaving's. Which is if households start spending their past savings or taking a step further if households borrow to pay for their consumption. Thus if abundant and cheap credit is made available to households who then spend it, it would give a boost to corporate profitability. Moderation of consumer inflation may also provide higher consumer surplus. Thus households may be better placed to drive corporate profitability. However since the size of that spend is much limited compared to investment size (as has been the case in the past) it may not push up the corporate profit growth by a large extent.

### **Lowering Fiscal Deficit limits Corporate Profits:**

Government spending in the economy — be it for the creation of public utilities or even direct transfers to the households — ultimately creates revenues and aids profitability. However, at a time when the other big driver of corporate profit, i.e., investment is struggling, the check in fiscal deficit may further aggravate the corporate earnings pressure. The boost in aggregate corporate profitability during FY10-FY11 owes a lot to the spike in government spending in H2FY09 in response to the global financial crisis. Of course the government's fiscal deficit rose sharply around that time but what were the other choices post the Lehman Shock?

### **Current Account Surplus Boosts Profits:**

Current Account Deficit (CAD) is technically foreign dis-savings. When payments to foreign participants in a domestic economy exceed the receipts from them, then there is a net outward transfer of wealth from domestic economy. This transfer of wealth drags down economy wide profitability. In case of Current Account Surplus just the opposite happens. It may be noted that reduction of CAD as is the case currently in India creates a base for revival of corporate profit growth.

### **What Does KLPE Tells About Future Corporate Profitability of India:**

If savings/surpluses of sectors such as household, government, foreign investors/trade partners are not circulated back to the economy for consumption or real assets creation, the aggregate corporate profitability will be dragged lower. Economic uncertainty may discourage household from spending and persuade them to put money in savings deposit. Likewise banks struggling with corporate NPA may adopt a very conservative approach to lending. One will limit consumption the other will limit investment and creation of real asset. Both these feed into systemic low capacity utilisation which reduces corporate appetite for investment. The vicious cycle in private sector has potential to limit profitability/ growth for next two-three years. Government spending may have saved the situation in

the medium term that would have caused government's fiscal deficit to rise. While fiscal discipline has long term benefits it does not help the corporate profitability in the short to medium term. What may significantly save the day is heavy duty transfer of foreign savings in India in the form of Investment. But that may not be easy, given the global uncertainty and the ensuing reduced risk appetite for emerging market investments such as India.

Thus unless government spends heavily on the economy and households too spend, the aggregate corporate profit growth of India may continue to remain lukewarm. The profit growth is less likely to fall to FY13 and FY14 levels given some spending by government on Seventh Pay Commission, but believing that alone and an improving CAD situation will boost corporate profit in next two years is possibly a bit optimistic.

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# Papers Presented at the Inaugural India Research Conference: A Summary

## Ashok Banerjee



Ashok Banerjee is a senior Professor in the Finance and Control group at IIM Calcutta. He takes several advanced courses in Finance like Corporate Financial Reporting, Corporate Finance, Corporate Restructuring, Quantitative Applications in Finance and Trading Strategies. He is also the faculty in-charge of the Financial Research and Trading Laboratory at IIM Calcutta.

It was mentioned in the last issue (Volume 3, Issue 5) of Artha that IIM Calcutta in association with Stern School of Business of New York University (NYU – Stern) has organized the first ever India Research Conference on 20 May, 2016 at NYU – Stern. Five papers were presented in the conference. John Lipsky, the former First Deputy Managing Director of the International Monetary Fund (IMF), delivered the keynote address on the role of IMF in post-crisis era. The one-day event concluded with a panel discussion on “Unleashing Growth in Rural India”. The panel discussion was moderated by Marti G. Subrahmanyam of NYU Stern School of Business.

The five papers, presented in the conference, look at five different aspects of Indian financial markets and the role of market participants. We provide a summary of the papers.

### ◆ **The Transmission of Monetary Policy *Within* Banks: Evidence from India**

*Abhiman Das (Reserve Bank of India), Prachi Mishra (Reserve Bank of India), N.R. Prabhala (University of Maryland and CAFRAL India)*

The paper analyses lending response within banks to easing of liquidity by RBI (mainly the Cash Reserve Ratio). Specifically, the paper examines how liquidity injection or contraction translate into lending outcomes on the ground. Authors highlight that besides external frictions faced by banks, internal (intra-bank) frictions also impact how banks respond to monetary policy. Using a massive dataset covering 125,000 bank branches over two decades, the paper shows that within bank variation in lending is significant. Authors present some interesting branch level findings. For example, an increase in loanable resources increases lending more in branches that have less complicated loan



structures, have more expertise and are loaded by less bureaucracy, are located in rural areas, and make less risky loans. The differential response of bank lending within branches could also be driven by macroeconomic variables other than monetary policy. However, the paper shows that after controlling for (state) election year effects and inflation, the results remain similar. The paper has also performed robustness test with two other monetary transmission variables – the repo rate and the statutory liquidity ratio (SLR).

The results for state-owned and private sector banks are shown separately. There is some evidence of slower transmission hypothesis for state-owned banks. It is observed that resource allocation systems in the state-owned banks do not penalize poorly performing branches. Rural branches of private sector banks react less to monetary policy changes.

#### ◆ **Stock Market Liquidity: Role of Short-term and Long-term Traders**

*Mila Getmansky (University of Massachusetts at Amherst), Ravi Jagannathan (Northwestern University Kellogg School of Business) and Liorana Pelizzon (Goethe University), Ernst Schaumburg (Federal Reserve Bank of New York)*

The paper introduces a new algorithm to classify short term and long term traders and looks at the behavior of traders during normal price fluctuations and fast market crash. The short term traders (STTs) rarely carry inventory overnight and they hold inventory position for a very short period (less than 10 minutes) during the day. During normal price fluctuations, it is observed that short term traders buy (sell) when prices decline (rise) thereby providing liquidity and bringing price stability. The study identifies two fast crashes (May 19 and 22, 2006) in the sample- days when the price for the stock declined by more than 3% and then recovered by more than 3% during a 15-minute time span. During fast crashes, however, it is the slow moving long term traders who play stabilizing role while the short term traders withdraw liquidity.

The paper uses intraday data of a representative large Indian stock for 53 trading days during April – June 2006 – a period when algorithmic trading was not allowed in India. One of the major findings of the paper is the role of order modifications by STTs. Order modification is an important tool the STTs use in managing inventory risk. When STT inventories are large and positive (negative) the ask-side (bid-side) becomes more liquid and the bid-side (ask-side) becomes less liquid due to order

modifications. The paper decomposes stock returns into two orthogonal components – private return (price change due to market order) and public return (price change due to fresh limit order and order modifications). It was observed that during one of the fast crashes (May 19, 2006) in India, most of the price decline was due to private information – sell orders depleting the limit order book without the book getting replenished. The public return component on that day was positive indicating that order modifications prevented prices from falling further. In contrast, during the crash on May 22 evaporating limit orders due to order cancellations, i.e., public return component contributed as much to the crash.

◆ **Auctioning the Underwriting Spread: Implications for Information Production and Insurance**

*Sudip Gupta (Indiana University), Rangarajan K. Sunaram (NYU Stern School of Business), M. Suresh Sundaresan (Columbia University)*

The paper deals with two-stage mechanism for selling government securities by the Reserve Bank of India (RBI). The first stage of the auction is a unique variant of traditional auction mechanism where the RBI auctions the underwriting of the debt. The primary dealers are required to participate in the underwriting auction. Authors find that underwriting auction outcomes, and particularly the auctions stop-out price, are significant drivers of the probability of devolvement. Upon completion of the underwriting auction, the actual auction of debt takes place in the second stage. In the second stage bidders include underwriters who was in the first stage underwriting. The idea behind stage one auction is to ensure subscription of residual securities in the event of unsatisfactory second stage outcomes. Knowing which auction mechanism will be used in the second stage would influence the way in which dealers would bid in the first-stage underwriting auctions to supply insurance/guaranteed subscription. The auctions could be uniform price-based or multiple price-based (i.e., discriminatory).

Using proprietary data on government securities auctions in India between 2006 and 2012, authors show that underwriting commissions for discriminating auctions are higher and exhibit more volatility than those for uniform price auctions. The first-stage auction of underwriting provides significant information about the possible devolvement of the main auction (second stage). It also provides more information about post auction secondary market prices relative to pre-auction variables.

◆ **Foreign Fund Flows and Asset Prices: Evidence from the Indian Stock Market**

*Viral V. Acharya (NYU Stern), V. Ravi Anshuman (Indian Institute of Management Bangalore) and K. Kiran Kumar (Indian Institute of Management Indore)*

The authors study the effect of foreign fund flows on asset prices by investigating the link between foreign institutional investor (FII) flows and stock returns in India. The paper evaluates the domestic equity market performance in India both in terms of the magnitude of the immediate impact of foreign fund flows, as well as the permanence of the impact. Foreign fund flows (purchase and sell) in Indian stock market are now a sizeable portion of the market activity. Cumulative net investment flows from FIIs, have exceeded USD 150 billion during 2001-2013. The trend continued beyond 2013- FII inflows hit USD 20 billion mark in first half of 2014. There is a wide spread perception that FII money is essentially ‘hot’ money and hence such flows may create substantial volatility in markets, especially during periods of market stress. During 2007-2009 (global financial crisis), FII inflows turned negative, consistent with the overall flight-to-quality of global capital flows. The volatility of NIFTY was also much higher during this period lending casual support to the perception of FII ‘hot’ money.

The authors examined several questions – what are the principal drivers of FII flows? How do FII flows affect asset prices and through which channels? The paper, using unique stock-level daily FII flows data during the 2006-2013 period, examines how stock returns differ between stocks experiencing foreign fund inflows versus foreign fund outflows on a given day. The study specifically looks at immediate price impact of unexpected fund flows (innovations in order flow).

The study finds that stocks with high innovations in FII flows are associated with a coincident price increase that is permanent, whereas stocks with low innovations in FII flows are associated with a coincident price decline that is in part transient and reverses within one week. The temporary effect accounts for nearly 16% of the annualized volatility of a typical stock.

The study empirically examines the impact of FII flows during periods of market stress. Comparing the price impact of FII flows during the financial crisis period in India (Jan – Dec 2008) and during the non-crisis period, authors find that excess FII sales have greater adverse impact during the crisis period and excess FII purchases have greater impact during other period. Authors have also found, using CBOE VIX levels, that there is volatility spillover from the developed markets into emerging markets.

**◆ Non-Rating Revenue and Conflicts of Interest**

*Ramin P. Baghai (Stockhold School of Economics), Bo Becker (Stockholm School of Economics)*

The paper takes up an interesting issue of conflict of interest for rating agencies when they provide other (non-rating) services to the issuers seeking rating. Authors observe that rating agencies, on average, rate securities issued by companies that also hire them for non-rating services 0.3 notches higher. The paper also finds that within rating categories, default rates are higher for firms that have paid for non-rating services. These findings have huge implications for the potential regulation of credit rating agencies.

The issue of conflict of interest of rating agencies with issuer is an age-old debate as the rating agencies follow “issuer-pays” business model. Such a compensation arrangement leads to a conflict of interest between producers of ratings (the agencies) and users of ratings (the issuer). The present study explores a new dimension of conflict of interest when the rating agencies offer non-rating services to any issuer. The regulation in India now requires Indian rating agencies (including Indian subsidiaries of foreign rating agencies) to disclose important details about their compensation arrangements with issuers of debt securities, including fees for non-rating services. The study empirically finds that issuers tend to obtain higher ratings the more (non-rating) revenue they generate for an agency. Specifically it was observed that default rate of investment-grade firms that pay for non-rating services is about 0.7 percentage point higher than that of firms that don't. The importance of payments for non-rating services is twice as large in the high yield range.

One may argue that firms with poor risk management practices may obtain consultancy (non-rating) services from a rating agency to improve its internal control systems and hence obtain better rating from the same agency. If that has to be true, the subsequent default rates for such firms should be lower. But the paper finds the opposite is true.

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