

The financial year 2007-08 had a big blow of financial loss to many Indian companies including banking sector due to derivatives contract. Derivative contract is a financial contract whose value is derived from the performance of assets, interest rates, currency exchange rates or indexes. Derivative transactions include structured debt obligation, caps, floors, swaps, collars, forwards and many permutation and combinations of these products.

The estimated loss on account of forex loans and outstanding forex derivatives on mark to market (MTM) basis is Rs 43000 crores to BSE 100 companies as per recent Edelweiss Report. Out of this, Rs 24300 crores is based on account of currency swaps, interest rates etc. It is further estimated that 10% appreciation in Rupee may give rise in MTM gain of Rs 12200 crores. The financial numbers as estimated show the impact of derivatives on profitability of company. It is worth to note that this is based on BSE 100 companies, who publish the data. There are lot more listed and unlisted companies, if we take into consideration, the impact of derivatives would be huge. There are lot more litigations going on in Indian courts between corporate and bankers. The argument of corporate is that the banker has got signed the documents with inadequate understanding and many lapses. It is also discussed that what compelled bankers to entered into a contract in large scale with their clients? Thus the question comes for consideration that whether Derivative (Financial) is a necessary evil?

The Indian Accounting Standard 30 (AS-30) has played major role in reporting such MTM loss. The government /its promulgated body, ICAI, has to come out with some explanation for reorganization of loss for profit and loss account of corporate. Now the time has turn around and Rupee is becoming stronger, the ill effect of derivatives for forex, swaps, interest rates and futures is about to disappear. RBI is also closely monitoring the situation. All these remedial or precautionary measures are in place to protect our economy. The important part is whether balancing of business risk, which are

exposed thru foreign business can be mitigated by derivatives ? Secondly ,one need to understand that derivatives are not only used in foreign transactions but also in domestic market transactions.









This discussion will compel us to make an understanding of derivative. Derivative would arrive their values out of “underlying”. The underlying could be interest rate ,security price, foreign exchange rate, commodity price, index of prices ,index of rates, performance of contractual obligations or occurrence or occurrence or nonoccurrence of some events. Underlying is not the asset or liability itself. This is good instrument to hedge the risk in a turbulent economy . However, if it is used as a speculative instrument , the result of usage would be more dangerous.

### **Derivatives based on Trade forum:**

- (1) OTC Derivatives: These derivatives are traded over the counter directly between two parties. The example of such derivatives are swaps, forward rate contracts etc. It is difficult to get financial numbers as transactions are taking place between two parties. As per Bank of International Settlement, The total outstanding notional amount is \$684 Trillion ( \$ 1 Trillion = Rs 45 lacs cores) as on 30-6-2008.
- (2) Exchange Traded Derivatives: These are derivatives traded in a standardized form thru exchange. The margin money is deposited with exchange by both the parties to work an Exchange as a guarantor. The largest number of transaction are taking place at Korea Exchange, which is known as KOPSI Index.

## Examples of huge loss under derivatives:

The prudent man has to learn a lesson from the following few examples that one need not to venture in this area unless he is suppose to and based on his real requirements:

#	Nominal Amount Lost	USD FX Rate at time of loss	USD Equivalent at time of loss	USD Inflation to 2007	Real Amount Lost	Country	Company	Source of Loss	Year	Person(s) associated with incident
1	EUR 4.9 bn	1.473	USD 7.22 bn	-3.7%	USD 6.95 bn	 <a href="#">France</a>	<a href="#">Société Générale</a> <sup>[3]</sup>	European Index Futures	2008	<a href="#">Jérôme Kerviel</a>
2	USD 6.5 bn	1	USD 6.5 bn	2.8%	USD 6.69 bn	 <a href="#">United States</a>	<a href="#">Amaranth Advisors</a> <sup>[4]</sup>	Gas Futures	2006	<a href="#">Brian Hunter</a>
3	USD 4.6 bn	1	USD 4.6 bn	27.2%	USD 5.85 bn	 <a href="#">United States</a>	<a href="#">Long Term Capital Management</a> <sup>[5]</sup>	Interest Rate and Equity Derivatives	1998	<a href="#">John Meriwether</a>
4	JPY 285 bn	108.78	USD 2.62 bn	32.1%	USD 3.46 bn	 <a href="#">Japan</a>	<a href="#">Sumitomo Corporation</a> <sup>[6]</sup>	Copper Futures	1996	<a href="#">Yasuo Hamanaka</a>
5	BRL 4.62 Bn	1.833	USD 2.52 Bn ;	-3.7%	USD 2.43 bn	 <a href="#">Brazil</a>	<a href="#">Aracruz</a> <sup>[7][8]</sup>	FX Options	2008	<a href="#">Isac Zagury</a> , <a href="#">Rafael Sotero</a>
6	USD 1.7 bn <sup>[9]</sup>	1	USD 1.7 bn	39.9%	USD 2.38 bn	 <a href="#">United States</a>	<a href="#">Orange County</a> <sup>[10]</sup>	Interest Rate Derivatives	1994	<a href="#">Robert Citron</a>
7	DEM 2.63 bn	1.655	USD 1.59 bn	43.5%	USD 2.28 bn	 <a href="#">Germany</a>	<a href="#">Metallgesellschaft</a> <sup>[11]</sup>	Oil Futures	1993	<a href="#">Heinz Schimmelbusch</a> <sup>[12]</sup>
8	JPY 166 bn	111.08	USD	43.5%	USD	 <a href="#">Japan</a>	<a href="#">Showa Shell Sekiyu</a>	FX	1993	

			1.49 bn		2.14 bn		<a href="#">[13]</a> <a href="#">[14]</a>	Forwards		
9	JPY 1536 bn	102.18	USD 1.50 bn	39.9%	USD 2.09 bn	 <a href="#">Japan</a>	<a href="#">Kashima Oil</a> <sup>[14]</sup>	FX Forwards	1994	
10	HKD 14.7 bn	7.786	USD 1.89 bn	-3.7%	USD 1.82 bn	 <a href="#">China</a>	<a href="#">CITIC Pacific</a> <sup>[15]</sup>	Foreign Exchange Trading	2008	<a href="#">Frances Yung</a>
11	GBP 827 mio	1.579	USD 1.31 bn	36.1%	USD 1.78 bn	 <a href="#">United Kingdom</a>	<a href="#">Barings Bank</a> <sup>[16]</sup>	Nikkei Futures	1995	<a href="#">Nick Leeson</a>
12	EUR 1.4 bn	0.923	USD 1.29 bn <sup>[17]</sup>	20.4%	USD 1.56 bn	 <a href="#">Austria</a>	<a href="#">BAWAG</a> <sup>[18]</sup>	Foreign Exchange Trading	2000 <sup>[17]</sup>	<a href="#">Wolfgang Flöttl</a> , <a href="#">Helmut Elsner</a> <sup>[18]</sup>
13	USD 1.1 bn	1	USD 1.10 bn	36.1%	USD 1.50 bn	 <a href="#">Japan</a>	<a href="#">Daiwa Bank</a> <sup>[19]</sup>	Bonds	1995	<a href="#">Toshihide Iguchi</a>
14	EUR 0.75 bn	1.473	USD 1.10 bn	-3.7%	USD 1.06 bn	 <a href="#">France</a>	<a href="#">Groupe Caisse d'Epargne</a> <sup>[20]</sup> <sup>[21]</sup>	Derivatives	2008	<a href="#">Boris Picano- Nacci</a>
15	BRL 2 bio	1.833	USD 1.09 bn	-3.7%	USD 1.05 bn	 <a href="#">Brazil</a>	<a href="#">Sadia</a> <sup>[7]</sup> <sup>[8]</sup> <sup>[22]</sup>	FX and Credit Options	2008	<a href="#">Adriano Ferreira</a> , <a href="#">Álvaro Ballejo</a>
16	GBP 0.4 bn	1.638	USD 0.66 bn	29.2%	USD 0.85 bn	 <a href="#">United Kingdom</a>	<a href="#">Morgan Grenfell</a> <sup>[23]</sup>	Shares	1997	<a href="#">Peter Young</a>
17	USD 0.6 bn	1	USD 0.60 bn	39.9%	USD 0.84 bn	 <a href="#">United States</a>	<a href="#">Askin Capital Management</a> <sup>[24]</sup>	Mortgage- Backed Securities	1994	<a href="#">David Askin</a>
18	EUR 0.60 bn	1.371	USD 0.82 bn	0.0	USD 0.82 bn	 <a href="#">Germany</a>	<a href="#">WestLB</a> <sup>[25]</sup>	Common and Preferred Shares	2007	<a href="#">Friedhelm Breuers</a> <sup>[26]</sup>
19	USD 0.69 bn	1	USD 0.69 bn	15.3%	USD 0.80 bn	 <a href="#">United States</a>	<a href="#">AIB/Allfirst</a> <sup>[27]</sup>	Foreign Exchange Options	2002	<a href="#">John Rusnak</a>

20	DEM 0.47 bn	2.587	USD 0.18 bn	320.6%	USD 0.76 bn	 <a href="#">Germany</a>	<a href="#">Herstatt Bank</a> <sup>[28] [29]</sup>	Foreign Exchange Trading	1974	<a href="#">Dany Dattel</a>
21	CAD 0.68 bn	1.066	USD 0.64 bn	0%	USD 0.64 bn	 <a href="#">Canada</a>	<a href="#">Bank of Montreal</a> <sup>[30][31]</sup>	Natural gas derivatives	2007	David Lee, Kevin Cassidy <sup>[32] [33]</sup>
22	USD 0.55 bn	1	USD 0.55 bn	9.8%	USD 0.60 bn	 <a href="#">China</a>	<a href="#">China Aviation Oil (Singapore)</a> <sup>[34]</sup>	Oil Futures and Options	2004	<a href="#">Chen Jiulin</a>
23	CHF 0.63 bn	1.451	USD 0.43 bn	27.2%	USD 0.55 bn	 <a href="#">Switzerland</a>	<a href="#">Union Bank of Switzerland</a> <sup>[35]</sup>	Equity Derivatives	1998	<a href="#">Ramy Goldstein</a>
24	USD 0.28 bn	1	USD 0.28 bn	82.5%	USD 0.51 bn	 <a href="#">United States</a>	<a href="#">Merrill Lynch</a> <sup>[36]</sup>	Mortgages (IOs and POs) Trading	1987	<a href="#">Howard A. Rubin</a>
25	USD 0.28 bn	1	USD 0.28 bn	82.5%	USD 0.51 bn	 <a href="#">United States</a>	<a href="#">State of West Virginia</a> <sup>[37]</sup>	Fixed Income and Interest Rate Derivatives	1987	<a href="#">A. James Manchin</a>
26	USD 0.35 bn	1	USD 0.35 bn	39.9%	USD 0.49 bn	 <a href="#">United States</a>	<a href="#">Kidder Peabody</a> <sup>[38]</sup>	Government Bonds	1994	<a href="#">Joseph Jett</a>
27	USD 0.4 bn	1	USD 0.40 bn	20.4%	USD 0.48 bn	 <a href="#">United States</a>	<a href="#">Manhattan Investment Fund</a> <sup>[39]</sup>	Short IT stocks during the internet bubble	2000	<a href="#">Michael Berger</a>
28	EUR 0.30 bn	1.244	USD 0.37 bn	9.8%	USD 0.41 bn	 <a href="#">Austria</a>	<a href="#">Hypo Group Alpe Adria</a> <sup>[40]</sup>	Foreign Exchange Trading	2004	
29	USD 0.35 bn	1	USD 0.35 bn	0.0%	USD 0.35 bn	 <a href="#">United States</a>	<a href="#">Calyon</a> <sup>[41]</sup>	Credit Derivatives	2007	<a href="#">Richard "Chip" Bierbaum</a>

30	AUD 0.36 bn	0.854	USD 0.31 bn	9.8%	USD 0.34 bn	 <a href="#">Australia</a>	<a href="#">National Australia Bank<sup>[42]</sup></a>	Foreign Exchange Trading	2004	<a href="#">Luke Duffy</a>
31	EUR 0.30 bn	0.895	USD 0.27 bn	17.1%	USD 0.31 bn	 <a href="#">Belgium</a>	<a href="#">Dexia Bank<sup>[43]</sup></a>	Corporate Bonds	2001	
32	USD 0.207 bn	1	USD 0.207 bn	43.5%	USD 0.30 bn	 <a href="#">Chile</a>	<a href="#">Codelco<sup>[44]</sup></a>	Copper, silver, gold futures	1993	<a href="#">Juan Pablo Davila</a>
33	USD 0.16 bn	1	USD 0.16 bn	39.9%	USD 0.22 bn	 <a href="#">United States</a>	<a href="#">Procter &amp; Gamble<sup>[45]</sup></a>	Interest Rate Derivatives	1994	<a href="#">Raymond Mains</a>
34	USD 0.2 bn	1	USD 0.20 bn	6.2%	USD 0.21 bn	 <a href="#">China</a>	<a href="#">State Reserves Bureau Copper Scandal<sup>[46]</sup></a>	Copper Futures	2005	<a href="#">Liu Qibing<sup>[47]</sup></a>
35	GBP 90 mio	1.638	USD 0.15 bn	29.2%	USD 0.19 bn	 <a href="#">United Kingdom</a>	<a href="#">NatWest<sup>[48]</sup></a>	Interest Rate Options	1997	<a href="#">Kyriacos Papouis</a>
36	USD 0.11 bn	1	USD 0.11 bn	39.9%	USD 0.15 bn	 <a href="#">United States</a>	<a href="#">Cuyahoga County, Ohio<sup>[49]</sup></a>	Leveraged Fixed Income	1994	
37	USD 0.14 bn	1	USD 0.14 bn	-3.7%	USD 0.13 bn	 <a href="#">United States</a>	<a href="#">MF Global<sup>[50]</sup></a>	Wheat Futures	2008	<a href="#">Evan Dooley</a>
38	USD 0.12 bn	1	USD 0.12 bn	-3.7%	USD 0.12 bn	 <a href="#">United States</a>	<a href="#">Morgan Stanley<sup>[51]</sup></a>	Credit-index options	2008	Matt Piper
39	USD 0.1 bn	1	USD 0.10 bn	15.3%	USD 0.12 bn	 <a href="#">Croatia</a>	<a href="#">Riječka banka (Rijeka Bank)<sup>[52]</sup></a>	Foreign Exchange Trading	2002	<a href="#">Eduard Nodilo</a>
40	SEK 630 mio	6.585	USD 0.10 bn	0.0%	USD 0.10 bn	 <a href="#">Sweden</a>	<a href="#">Carnegie Investment Bank<sup>[53]</sup></a>	Equity Derivatives	2007	<a href="#">Carnegie CEO, Carnegie Board</a>

## **Conclusion:**

In India also few exchanges of securities and commodities are working 5 days in a week to facilitate the transaction of derivatives. One need to be careful while entering into contract for derivative transactions as Trillions of \$ are employed by few Financial worthy personalities. If the transactions are underlying by genuine business, the instrument will work as risk shield otherwise it would work wealth builder or destructor. If the derivatives are used as speculative tool, the chances are again based on similar theory of luck/probability. One need to understand that Derivatives are essentials of business in a global economy whether described it as necessary evil. The essence is lying in a how smart one can use as a business tool rather than speculative tool.