

Effectiveness of Risk Management of Credit Risks of Life Insurance Companies in the Private Sector in India

**B. R. Hariharan*

*** Vedala Naga Sailaja*

Abstract

This article attempted to study the effectiveness of credit risk management of life insurance companies in the private sector in India and also the role played by the Indian insurance regulator (IRDAI) during the period under study by the public disclosures available. This was done by studying the following public disclosures of life insurance companies : (a) details regarding debt securities (investment assets rating profile), (b) details of non-performing assets, (c) statement of downgraded investments, and (d) loans given against life insurance policies.

Key words : life insurance companies, policies and regulation, insurance laws, credit risk management, Insurance Regulatory and Development Authority of India (IRDAI)

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Credit risk and its management is very important for companies dealing with finance like banks, non-banking finance companies (NBFC), and insurance companies. Credit risk is an inherent feature for this sector where they lend/invest to either individuals or corporates. Till the year 2000, life insurance in India was monopolized by Life Insurance Corporation of India (LIC) and there was no private player. Added to this, there was hidden guarantee by the Government of India for the LIC, with the GoI being the main promoter. Also, the concept of life insurance was limited to the middle class salaried to whom the insurance was sold mainly as a tax saving product. The products sold were plain vanilla. There was no concept of unit linked products (ULIP) which were mainly investment oriented.

The life insurance industry was opened to the private sector in 2000, and as on September 30, 2017, there were 23 players. Foreign players who had very rich experience in life insurance industry from developed countries like United States of America (USA), South Africa, European countries became partners with the Indian players for setting life insurance companies. With them, they brought innovative products which were mostly investment focused unlike the traditional products which were pure insurance risk based.

With setting up of the National Stock Exchange (NSE) in 1994, the Indian stock market also entered into a different pace, and transparency was evident in stock market trading. Currently, the volume of trading of NSE is nearly three times that of the BSE. These developments have encouraged the public to get a taste and share of

* *Research Scholar*; K L University, Greenfields, Vaddeswaram, Guntur District - 522 502, Andhra Pradesh.

E-mail: hariharan@shriram.com

** *Assistant Professor*; KLUBS, K L University, Greenfields, Vaddeswaram, Guntur District - 522 502, Andhra Pradesh.

E-mail: drvedalasailaja@kluniversity.in

action of stock market and look for products in mutual funds and life insurance industry without directly taking risks.

The insurance penetration, measured as a percentage of premiums to a country's gross domestic product (GDP) has gone up to 3.4% and also, the insurance density calculated as the ratio of premium in US \$ to total population is up to 11.23, thanks to the entry of private players and their aggressive and focused marketing. Life insurance companies in the private sector manage assets of Indian rupees amounting to INR 2826293 crores (28262930 million) as on September 30, 2016. The above data has been taken from the public disclosures by the life insurance companies. With 23 life insurance companies in the private sector, millions of lives are covered by these companies. The life insurance contract being a long term contract, extends from a minimum of 5 years to a maximum of 25 years, and hence, it is important that these companies manage their assets in a proper manner.

In the wake of failure of Barings Bank (1995) and Long- Term Capital Management (LTCM) (1998), even in the most developed countries like in United Kingdom (UK) and United States of America, the importance of credit risk management cannot be overemphasized.

In September 2016, ICICI Prudential Life Insurance came out with the public issue and with the prodding of Insurance Regulatory and Development Authority of India (IRDAI), many of the other insurers will be going public in the next few years. This enlarges the stakeholders of the insurance sector, which will include the public not only as policyholders, but also as shareholders.

With such huge amounts of money involved and covering millions of stakeholders, it is important for us know the effectiveness of risk management of credit risk. In this article, we have made an attempt to find out the effectiveness of credit risk management and the role of the insurance regulator, namely the IRDAI, from the public disclosures by the life insurance companies.

Review of Literature

According to Vedpuriswar (2003), credit risk management became a prime concern for businesses. Bankruptcies and huge losses have re-emphasized the importance of identifying and managing credit risks effectively. In simple terms, credit risk refers to the possibility of default by the borrower. More generally, it refers to failure of the counter party to honour its side of the contract. Credit risk, is by far, the biggest risk that financial institutions take and has been the root cause of many failures of banks.

Dionne (2013) identified that out of the top four main risks for banks, credit risk, which includes default risk, constitutes 80%. Also, according to him, financial crisis of 2007-08 was not directly related to structured finance, but it is due to poor risk management.

Narasimhan (2013) focused his attention managing the default risk at the stock exchange. He said that before the setting up National Stock Exchange and National Clearing Corporation, stock exchanges were functioning as a conduit for transferring credit risk from one member to another. As the risk was getting transferred from one to another, the possibility of risk getting concentrated on a few members was not ruled out. If the members who accumulated the risk on their account were not resourceful enough, all those investors and constituents of those members were taking the default risk of those members.

The National Stock Exchange introduced the concept of 'novation' in securities trading on the exchange platform. With novation in place legally, the clearing corporation stands as the seller (i.e clearing corporation will be the seller) for the buy by an investor and buyer for sell by an investor. In this novation arrangement, the whole default risk will get concentrated in the clearing corporation and the investors have the comfort of clearing corporation as the counter party. Of course, the clearing corporation has the necessary financial capability and legal empowerment to handle the risk.

Credit risk comes in two forms - traditional credit (loan) risk and trading credit risk. Credit risk from trading

involves both pre - settlement and settlement risk. Pre - settlement risk is the probability of loss due to trading counter party defaulting before the settlement. The risk is the sum of the replacement cost of the position and the potential future exposure as a result of market movements. On settlement day, the exposure is the value of the cash flows to be received on the securities. Even if there is no default, there is a risk of the bond getting downgraded followed by the next step of not getting the interest due or delay in receipt of interest and finally, the borrower may default in repayment of the principal itself.

Life insurance companies also share/transfer their risk by reinsuring with reinsurance companies. In the failure of the reinsurers to keep up the commitment for payment of their portion, in case of claim, life insurance companies advance loans to their policyholders during the policy term on certain specified conditions. In these cases also, there is a possibility of policyholders defaulting to pay interest on their loans taken against their policy. It is very difficult to completely avoid credit risk but measures can be taken for reducing it to the minimum.

Insurance Regulatory and Development Authority of India (IRDA) (2016) has put the following restrictions regarding investments to mitigate and reduce credit risks. They have brought regulations in the pattern of investments which takes care of asset classes and has defined 'approved investments' to take care of the quality of the investment in each asset class and has prescribed a minimum percentage for each of the above.

(i) With respect to pattern of investments, in case of life funds (shareholders and policy holders), they have to invest not less than 50% in Central and State Government securities. For pension and general annuity investment category, which consists of group insurance schemes lasting more than one year, they have mandated at least 40% should be invested in Central and State Government securities. In case of unit linked insurance plans (ULIP), since the policy holders want the funds to be invested as per the product design, which may consist of 100% equity or 100% debt or mix of equity and debt, in case of this fund, the IRDAI has not prescribed any minimum investment in government securities.

(ii) **Quality of Investments :** IRDAI has defined 'approved investments' for different asset classes of investment. In case of corporate bonds or debentures, it should not be rated less than AA or its equivalent and A1 or equivalent rating for short term bonds, debentures, certificate of deposit, and commercial paper. In case of equity securities, the companies should have declared dividend of not less than 10% for preceding previous two years to be considered as approved investments. After defining approved investments, IRDAI has mandated that approved investments should at least be 85% in case of life fund and in ULIP funds, it should be 75%. When it comes to pension and general annuity funds, the body has mandated that it should be 100%. Further, IRDAI has also stipulated that not less than 75% of investments in debt instruments (including Central and State Government securities) shall be in sovereign debt, AAA rating in case of long term debts, and A1 + or equivalent in case of short term debt instruments.

To see that life insurance companies follow these regulations and monitor the same, IRDAI has prescribed that data on the above information should be submitted in the formats suggested on a quarterly basis.

Objectives of the Study

The study has the following objectives:

- (i) To examine the role of insurance regulator - IRDAI in India for credit risk management of life insurance companies.
- (ii) To assess how the life insurance companies in the private sector have managed the credit risk and how effective they are.

Data and Methodology

It was decided to select the latest three years for the purpose of this study covering 2013 -14, 2014 -15, and 2015 -16 for all the 23 life insurance companies in the private sector in India. Since the disclosures selected for analysis of the data are on a quarterly basis, we considered the last quarter alone of each year for analysis which gives the picture of the whole financial year.

There are data available in the public disclosures of life insurance companies on the website of Insurance Regulatory and Development Authority of India (IRDAI) wherein life insurance companies were mandated vide circular no IRDA/F&I/CIR/F&A/012/01/2010 dated January 28, 2010 to disclose certain data and in a specified format on a quarterly basis (IRDAI, 2010).

Out of this, the following were found to be relevant to measure the effectiveness of credit risk management.

L29 : Details regarding debt securities (Investment Assets Rating Profile).

L33 : Details of non-performing assets (NPAs).

L35 : Statement of downgraded investments.

L15 : Loans given against life insurance policies.

Analysis and Discussion

When it comes to credit risk management for the life insurance companies in the private sector in India, the following scenario emerges.

(1) Trading Risks Pre-Settlement and Settlement Risks : In actual practice, after the setting up of the National Stock Exchange (NSE) in 1994, trading risk, especially pre-settlement risk and settlement risk have been taken care of by National Securities Clearing Corporation Limited (NSCCL) through separate settlement platform for equity and debt. Also, the insurance companies have their respective custodian banks who act as an intermediary with NSCCL for settling both equity and debt trades and this also removes the pre-settlement and settlement risk for both debt and equity.

(2) Traditional Credit Risk (Loans) : Banks and non-banking finance companies (NBFCs) whose main function is lending faces this risk - default of loans either in interest or principal or both. When it comes to life insurance companies, they advance loan against the policy and restrict the amount of loan to 90% of the surrender value of the insurance policy. And for availing this loan, the policy holder has to assign his/her policy in favour of the life insurance company.

In case of default of either interest or principal from the policy holders, this gets adjusted against the policy assigned. If the loan amount plus outstanding interest becomes more than the surrender value of the policy, the policy gets foreclosed. Hence, there is no credit risk in this case.

(3) Risk of Default by the Re-insurance Companies : This is taken care by getting into re-insurance arrangements only with top 10 re-insurers who are of international stature and with good credit ratings. Also, they resort to distributing the reinsurance with multiple re-insurers and selecting different re-insurer with each type of re-insurance. For example, for their catastrophe insurance, they may tie up with one re-insurance company and for other risk, they will enter into agreement with different re-insurer/s.

(4) Post Settlement Risk with Reference to Debt Securities : Debt portfolio of life insurance companies consist

of investment in Central and State government securities including treasury bills which are sovereign guaranteed and there is no risk. Similarly, investment in term deposits and certificate of deposit with scheduled banks carry no risk or very minimum credit risks. Investment in commercial paper gets invested only with A1+ rated script and that too for a shorter duration for less than 12 months and here also, the credit risk is very minimal. This leaves us only with credit risk in the investments in bonds and debentures of corporate companies.

(5) Analysis of the Disclosures : It is necessary for us to understand the significance of the information provided in the forms to see their relevance for our study.

(i) L 33 NPAs - Details of Non-Performing Assets : This gives us the details and quantum of non-performing assets (NPAs). A non-performing asset is defined as a loan or advance for which the principal or interest payment remained overdue for a period of 90 days as per Reserve Bank of India (RBI). This form provides the following details of NPAs of the insurer in crores as well as a percentage of the net current assets.

- ✧ Gross non-performing assets (NPA),
- ✧ Provision (NPA),
- ✧ Net investment assets,
- ✧ Write off made during the period,
- ✧ Percentage of NPA to net investment assets.

The above details are given under (a) bonds and debentures, (b) loans, (c) other debt instruments.

(ii) L 35 - Statement of Downgraded Investments Which Calls for Details on the Following :

- ✧ Amount invested,
- ✧ Date of purchase,
- ✧ Rating agency,
- ✧ Original grade,
- ✧ Current grade,
- ✧ Date of last downgrade.

This information is required for the quarter and 'as on date' meaning cumulative status as on the last date of the financial year.

(iii) L - 29 - Investment Assets Rating Profile : This gives the break-down of debt securities into 'AAA', AA or better, rated below 'AA' and above 'A', rated below 'A' but above 'B', and any others, with the values and as percentage of the total debt securities.

(iv) L - 15 - Statement of Loans to Policyholders Against their Policies : This reveals the amount of loans given to policyholders against the policy with the insurers.

We have analyzed the above forms namely L33, L35, L29, and L 15 and found the following :

(i) Non-Performing Assets : The status of non-performing assets is a very important factor especially in banks and NBFCs. The percentage of NPAs as a percentage of the loan portfolio is an indicator of the quality of the loans. It is a normal industry practice to express NPAs as a percentage of loan portfolio in case of banks and NBFCs, and

Table 1.Statement of Non-Performing Assets (NPAs)

Company Name	FY	Net Investment Assets (Millions INR)	Net NPA (Millions INR)	% of Net NPA to Net Investment Assets
HDFC Standard Life Insurance Company Ltd.	15-16	2,85,086	83.6	0.03%
	14-15	2,21,201	138.6	0.06%
	13-14	1,63,426	180.0	0.11%

as percentage of investment assets in case of life insurance companies. Similarly, in case of insurance companies, the NPAs as a percentage of the investment assets indicates quality of the investments. The present problem of the public sector banks is an alarming increase of their NPAs over the past few years. According to Life Insurance Corporation of India (2016), the insurer's gross NPA went up to 3.76 % as on March 31, 2016 as compared to 1.25% as on March 31, 2012. See under this scenario, the NPAs in case of life insurance companies in the private sector under the period of study came down to 0.03% as on March 31, 2016 compared to 0.11% of the net investment assets. Also, the NPAs were reported by only one insurer, namely HDFC Standard Life Insurance Company Limited. Therefore, for the purpose of analysis, the year wise percentage of NPAs of the net investment assets was calculated for the only company which had NPAs over the years under study. Analysis of the NPAs of life insurance companies in the private sector for the three years namely 2013-14, 2014 -15, and 2015-16 brings out an interesting picture as depicted in the Table 1.

Also, in only one life insurance company there were NPAs to the tune of INR 18.00 crores (180 million) as on March 31, 2014 and this got reduced to INR 13.86 crores (138.6 millions) in 2014-15 and finally, this stood at INR 8.36 crores (83.6 millions) as on March 31, 2016. Also, this figure came down to 0.03 % of net performing assets (debt) as on March 31, 2016 from 0.11% as on March 31, 2014.

(ii) Downgraded Investments : The quality of debt portfolio can also be gauged from credit rating of their securities and the movement of credit rating over a period. Down grading to default grade of 'D' increases the risk of the debt security, and this will lead to a non performing asset resulting from default of interest. Furthermore, the debt security in a company has to be monitored regularly in addition to careful scrutiny at the time of investing. According to Burugula (2017), credit rating agencies this year (2017) downgraded debt instruments of 116 companies according to Capitaline. Also, debt instruments of 42 companies were rated in the default category during January - May 2017. For the purpose of analysis, the status of debts securities with respective credit ratings as on March 31, 2014 was taken and the movement of the same securities as on March 31, 2016 was done to keep track of their downgrading. Based on this, a simple arithmetic was carried out.

Given this background, life insurance companies in the private sector have done very well during the period under study. Analysis was done on the movement of debt scripts from March 31, 2014 to March 31, 2016 which

Table 2. Grading Summary for the Period from April 1, 2014 to March 31, 2016

ORIGINAL GRADE	AA+	AA	AA-	A+	A	A-	D	TOTAL
AAA	30	2	2			1		35
AA+		11	10		1			22
AA			11				1	12
AA-				2				2
A							1	1
	30	13	23	2	1	1	2	72

was part of the portfolio of investments. It can be seen from the Table 2 that there were totally 72 debt scripts as on March 31, 2014 which got downgraded to various degrees. Out of this, 66 scripts were downgraded to AA- from credit rating of AAA, AA+, and AA. Only two scripts got downgraded from AA and A to D, which is the category of risk of default. This is only 0.03% of the total debt scripts which got their credit rating downgraded.

(iii) Asset Rating Profile: The asset rating profile of debt securities in the portfolio also reflects the quality of the debt securities. It also shows that the life insurance companies have been conservative in their approach and have adhered to the Circulars of the IRDAI with respect to investment in good quality of debt securities. This precaution at the time of investment and subsequent monitoring the credit rating helped in prevention of NPAs and definitely in keeping these to the minimum.

For the purpose of analysis, the status of Asset Profile as on March 31, 2014 and their respective percentage was worked out. This exercise was carried out to note the movements in the percentages over the years. This method of monitoring is also suggested by IRDAI in their formats of the quarterly investment returns. From the disclosure L-29, a summary was prepared to know the profile of the debt scripts in terms of their credit ratings. The following can be inferred from the Table 3 :

Table 3. Asset Rating Profile

	13-14 (millions INR)	As % of total	14-15 (millions INR)	As % of total	15-16 (millions INR)	As % of total
AAA Rated	14,11,756	70.60%	1,902,897	71.10%	21,13,670	79.00%
AA or Better	95,390	4.80%	1,13,258	4.20%	1,07,907	4.00%
Rated Below AA but Above A	10,428	0.50%	10,717	0.40%	25,169	0.90%
Rated Below A but Above B	96,814	4.80%	9,136	0.30%	9,579	0.40%
Any other	3,85,775	19.30%	6,41,199	24.00%	7,38,930	27.60%
Total	20,00,163	100.00%	26,77,207	100.00%	29,95,255	100.00%

AAA credit rating was given to 71% and scripts with AA and above were 5%. Therefore, 76% of the scripts belonged to credit rating of AA and above as on March 31, 2014. This grew to 83% at the end of March 31, 2016. AA and above rating fulfils the criteria of approved investments as per IRDAI. This definitely is a good credit risk management practice. Hence, it can be observed that insurers took adequate steps in minimizing the credit risk by investing in financially good scrips.

(iv) Loans Against the Policy : It was observed that total loans constitute a very small portion of the total assets under management and this grew from INR 41 crores (410 million) to 69 crores (690 millions) and we see from the analysis of NPAs that there was no default under this category.

Conclusion

(1) Credit Risk in Practice Versus Theory : Though in theory, there are different aspects of credit risk management like pre- settlement, settlement in case of equity and debt instruments, and post settlement risks for debt securities, including down grading of debt securities and consequently, default in interest or principal or both. However, in actual practice, there is no risk for pre settlement and settlement risk in case of equity and debt after the establishment of NSE and National Securities Clearing Corporation Limited (NSCCL) which acts as a centralized guarantor for both buyers and sellers. For insurance companies with the custodian acting as a role of a banker through whom the buying and selling of debt/equity scripts are settled, this takes the away the risk of pre-

settlement and settlement risk. The last one risk being down grading of debt securities is the actual risk faced by the insurers.

(2) Role of IRDAI in Credit Risk Management : Right from defining approved investment for debt securities and prescribing a minimum percentage investment in approved investments, it has ensured that insurance companies invest only in debt securities, which are to have high degree of safety regarding timely servicing of financial obligations and carry very low credit risk.

It has also mandated that insurers should invest not merely based on the credit rating of the debt securities, but independently verify the financials of a company before investing. Also, the insurers should have mechanism of reviewing the status of a company on regular intervals.

They have also mandated that the brokers are to be empanelled for both equity and debt trading after a detailed process of verifying their financial strength and their capability. They also prescribed that the performance of the brokers to be reviewed on an annual basis on certain internal parameters decided by the insurance company. Also, IRDAI has prescribed quarterly returns to be submitted by the insurers on the following to enable the regulator to monitor the quality of credit risk management :

- ✎ Statement of non- performing assets,
- ✎ Credit profile of debt securities,
- ✎ Statement of downgraded investments,
- ✎ Statement of loans.

By scrutinizing and monitoring the above quarterly returns, IRDAI ensures that life insurance companies are complying with the prescribed norms. They have also mandated quarterly audit by the concurrent auditors with detailed check lists for ensuring conformance to the circulars and guidelines and deviations if any from the prescribed norms. It also does inspection of life insurance companies on regular intervals to see that their processes are in order.

(3) Effectiveness of Credit Risk Management : We conclude that the overall credit risk management during the period under study seems to be very good by the following findings :

(i) Non-Performing Assets : Non - performing assets were to the tune of INR 8.36 crores (83.6 millions) as on March 31, 2016 and that too only in one life insurance company out of 24 life insurance companies and for the three years period. It stood a very small 0.03 % as on March 31, 2016.

(ii) Debt Assets Profile : The scripts belonging to credit rating of AA and above rose to 83% as on March 31, 2016 starting from 77% as on March 31, 2014. These debt securities are to have a high degree of safety regarding timely servicing of financial obligations and carry very low credit risk.

(iii) Downgraded Debt Scripts : From the beginning of April 1, 2013 to March 31, 2016, only two debt scripts out of 81 got downgraded from AA and A to D which is the category of risk of default. This is only 0.03% of the total debts scripts which got their credit rating downgraded.

(iv) Loans Against Policy Holders : Since these were advanced against policy holders' policies and that too, to the tune of INR 41 crores (410 million) to 69 crores (690 millions), it can be inferred from the analysis of NPAs that there was no default under this category.

(v) Re - Insurance Risk : Risk of default by insurance was not there during this period and also the amount of re-insurance premium paid only constituted a very small percentage of the gross premium. It was always less than 1.5% all through the years of the study.

Implications, Limitations of the Study, and Scope for Further Research

The study was limited to only one risk namely credit risk out of more number of risks, namely solvency risk, persistency risk, regulatory risk, compliance risk, liquidity risk, market risk, equity risk, competitors' risk, concentration risk, mortality risk, asset liability management risk etc., which are faced by the life insurance companies. Analysis was done only on the basis of four disclosures and that too based on the last quarter and that too only three years, that is, 2013 - 14, 2014 - 15, and 2015 - 16. Also, the study was done only on credit risks of corporate debts.

This study was conducted with one of the important key risks namely credit risk and its management and its effectiveness in life insurance companies in the private sector. Further research can be done with respect to other risks like solvency risk, persistency risk, regulatory risk, compliance risk, liquidity risk, market risk, equity risk, competitors' risk, concentration risk, mortality risk, asset liability management risk, and how effective they are.

Also, the study has been conducted at a time when Ministry of Corporate Affairs (MCA) of India and IRDAI are very particular that life insurance companies in India should change to adopting Ind -AS standards, which are an adapted version of International Financial Reporting Standards (IFRS). IRDAI in the circular dated December 30, 2016 published on their website a report of recommendations of Institute of Chartered Accountants of India (ICAI) for the transitions to IND AS standards from the financial year 2018-19 with corresponding figures for the year 2017-18. Adapting to these will bring about more stringent accounting of impairment of financial assets. Additional disclosures will also throw some more light into effectiveness of credit risk management. It will be worthwhile to study the situation after three years from now.

As mentioned in the analysis part under status of NPAs, NPAs have been rising steadily for LIC over the years and it stood at 3.76 % as on March 31, 2016. This shows there is a wide divide in the asset quality that exists between private sector and public sector insurance companies similar to banks. It might be worth to get deeper into this and attribute any specific reason for this.

Also, in the recent past, the mutual funds industry lost its net asset value significantly due to downgrading of Amtek, JSPL, and recently, IDBI Bank. A similar study of this nature with reference to the mutual fund industry would also bring out a different scenario keeping in mind that SEBI is regulating the MF industry. There could be a comparison of the regulators' role namely IRDAI and SEBI with reference to regulating and monitoring the quality of debt investments and their effectiveness.

Added to this, as stated under the downgraded investments, debt instruments of 42 companies were rated in the default category in period from January - May 2017. This added with already existing 97 companies, which had junk rating at the end of 2016, brings out a very dismal picture. Therefore, a similar study conducted in the coming three years will present the updated scenario in this regard.

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About the Authors

Dr. Vedala Naga Sailaja is a Faculty in K L U Business School, K L University. She has published more than 50 articles in various peer reviewed national and international journals. She has also authored chapters in edited books of different publications.

B. R. Hariharan is a Research Scholar and is currently pursuing his Ph. D in Management from K L University. He is a member of The Institute of Chartered Accountants of India and holds PGDBM from XLRI, Jamshedpur in addition his Masters in Commerce from Andhra University. He has three decades of industry experience in Finance and Accounts. At present, he is a Senior Advisor in a Private Life Insurance Company.