A Conceptual Framework for Growth of Credit Derivative Markets in India with reference to the Corporate Bond Markets

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ABSTRACT

Credit derivative instruments enable participants in the financial market to trade in credit as an asset, as they isolate and transfer credit risk. They also enable the market to separate funding considerations from credit risk. Credit derivatives have two main types of application – diversifying the credit portfolio and reducing credit exposure.

Despite the existence of credit derivative products namely credit default swaps, the corporate bond markets aren't picking up the way they should. It thus, becomes crucial to identify the chief components of the credit derivative eco-system and their inter-relationships so as to address the relevant issues plaguing the growth of corporate bond markets in India. This study is an attempt to develop a conceptual framework for Credit Derivatives in the Indian scenario.

The Indian debt market is dominated by Government Securities. Obviously, with the Government as the issuer there is hardly any credit risk as it is sovereign. On the other hand, the biggest investors are commercial banks and it is well known that it is the state owned banks that hold a majority in the banking industry – with SBI and PNB being the front runners. So, in a nut shell, the issuer is the Government and the lender is also a part of the Government. Clearly, there is no credit risk and thus no immediate need for hedging the same.

The corporates primarily avoid taking any debt. In the absence of an active corporate bond market, the corporates are indeed forced to accept inefficient interest rates. The banks as well as the corporates are comfortable doing business as it has been in practice for a very long period of time. Credit Derivatives is an answer to the said limitation.

After going into basics of the credit (debt) market in India, a model is proposed for growth of Credit Derivative markets in India.

Keywords: Credit Default Swaps, Credit Derivatives, Credit risk, Corporate Bond Markets, Risk Management

[A] INTRODUCTION

Concept of Credit Derivatives:

A credit asset is the extension of credit normally in the form of a loan, accounts receivable, instalment credit or financial lease contract.

Every credit asset is a bundle of risks and returns: every credit asset is acquired to make certain returns on the asset, and the probability of not making the expected return is the risk inherent in a credit asset. The credit asset may, of course, end up in a full or partial loss, which is also a case of volatility of return in that the return is negative.

There are several reasons due to which a credit asset may not end up giving the expected return to the holder: delinquency, default, losses, foreclosure, prepayment, interest rate movements, exchange rate movements, etc.

A credit derivative contract intends to create a trade in either some risk, or all the risk of volatility of return in a credit asset, without transferring the underlying asset.

Market participants in the credit derivative segment can be broadly classified in to *Protection Buyers* and *Protection Sellers*.

Protection Buyers:

The protection buyer is the entity that seeks protection against the risk of default of the reference obligation. The protection buyer may usually be a bank or financial intermediary which has exposure in credit assets. In such a case, the primary objective of a protection buyer is to hedge against the credit risks inherent in credit assets. In India, the credit assets which have been identified by RBI are Corporate Bonds which serve as the underlying for Credit Default Swaps.

Protection Sellers:

The protection seller is mainly motivated by yield enhancement, or getting to earn out of synthetic exposures where direct creation of loan portfolios is either not possible or not feasible. In OTC transactions, the protection sellers are insurance companies, banks, investment companies, etc. In case of capital market transactions, the securities are mostly rated, and the investors that take up these securities are based on investment objectives of the investor concerned. The protection seller may be taking a trading view and expecting the credit quality of the reference entity to improve.

Status of Corporate Bond Markets:

As of 2016, the Indian Corporate Bond market contributed only 14% of the GDP, whereas, Banking Assets were in the tune of 89% of GDP and equity markets 80% of GDP. Obviously, banks and equity markets are the primary sources of capital for business in India. But, there has been healthy growth in the Indian corporate bond markets in the 5 year period 2012-2017. The contribution of bond markets in incremental funding to the corporate sector has more than doubled. A string of favourable steps taken by regulators and policy makers to broaden the bond markets has been a key factor. Some of the key regulations contemplated in the 2018 Union Budget were:

- i. Large corporates to meet 25% of their funding needs through bond markets.
- ii. Regulatory recognition for investment in bonds to include 'A' rated bonds in addition to existing stipulations of only up to 'AA' rated bonds.
- iii. Introduction of uniform stamp duty for issuance of bonds across the country.

Challenges in the Development of Credit Derivatives Market

Need for Standardization: The regulations by the Bank for International Settlements (BIS), in 2002, sought to attach a risk weightage commensurate with the credit ratings, giving in to long standing demands of industry insiders. This forced banks to buy protection against lower rated loans, to ensure that they fulfil the 8% adequacy norm. It was also proposed to provide significant capital relief to the protection buyer and capital charge to the seller.

The Credit Derivatives definitions by International Swaps and Derivatives Association (ISDA) in 1999 have also looked at tackling some of these issues. The growth in the size of the market post 1999 lends credibility to the voices for standardization as a means to achieve transparency and market liquidity.

Need for Structured Products: Securitization is fast gaining acceptance in the Indian markets. Given the coupling with credit derivatives that exists in some securitization deals, the growth of securitization could possibly signal the entry of the related product. Such a product would look to transfer the credit risk from the bank to the Special Purpose Vehicle (SPV) by way of a credit derivative.

Consolidation in the Banking Industry: One of the major reasons for the success of Credit derivatives in the European markets is the extent of corporate loans. Additionally, a few large banks typically control most of the corporate debt. Therefore, finding a counter party for a credit swap is not too difficult. However, in India, the banking sector is fragmented, with the top 10 players commanding only 45% of the market.

However, there is a definite trend towards consolidation emerging in Indian banking industry. The ICICI and ICICI bank merger, HDFC Bank taking over already merged Centurion Bank of Punjab are steps in this direction. The biggest move recently has been the consolidation of the State Bank group. This trend could fuel the growth of the credit derivative market.

[B] LITERATURE REVIEW

Sr.	Title	Author	Concluding Remarks				
No.	The	Author	Concluding Remarks				
1.	A Primer on Credit	Stephen P. D'Arcy and	Banks were able to reduce or eliminate capital				
	Derivatives	Xinyan Zhao	allocated to debt hedged with credit default				
			swaps.				
2.	Credit Derivatives: An	David Mengle	Given the degree of standardization of CDS,				
	Overview		dealers are apparently able to trade balanced				
			books without significant residual risks that need				
			to be laid off on exchanges.				
3.	Developing Corporate	Jacob Gyntelberg, Guonan	Diversifying the investor base and improving the				
	Bond Markets in Asia	Ma and Eli Remolona	flow of market-relevant information are perhaps				
			more important in the long run.				
4.	Developing Multiple	Suresh Sundaresan	The government curve signals to the corporate				
	Layers of Financial		borrower the cost of risk-free borrowing at				

Table 1.1: Literature Review with Concluding Remarks

	Intermediation: The		different maturities. This benchmark risk-free
	Complementary Roles of		rate of borrowing at each maturity reduces the
	Corporate Bond Markets		problem of figuring out the cost of corporate
	and Banks		borrowing to the task of determining the spread
			over the risk-free borrowing rate.
5.	The Costs and Benefits	Guorong Jiang, Nancy	There are substantial macroeconomic and
	of Developing Debt	Tang and Eve Law	microeconomic benefits in a well developed bond
	Markets: Hong Kong's		market. Microeconomic efficiency gains, through
	Experience		diversification and control of credit and liquidity
			risks, improved corporate governance and better
			pricing of risks, are likely to have the
			macroeconomic effect of reducing the probability
			of financial crises and limiting any negative
			effects from them.
6.	Credit Derivatives and	Eli M Remolona and	Credit risk market innovations such as single-
	Structured Credit: The	Ilhyock Shim	name CDS contracts, traded CDS indices and
	Nascent Markets of Asia		CDOs have made significant inroads in Asia and
	and The Pacific		the Pacific. Single-name CDS referring to almost
			a thousand Asia-Pacific entities now trade in the
			market.
7.	Credit Derivatives in	Gregory R. Duffee and	Although the credit-derivatives market will be
	Banking: Useful Tools	Chunsheng Zhou	useful to the bank, its presence makes the loan-
	for Managing Risk?		sale market much less useful
		1	

A thorough exploration for research relevant to credit derivatives in India did not give up any satisfactory results. Close linkages were found with several papers talking about the development of bond markets and credit derivatives market in the Asian region. But there are fundamental differences in the Indian conditions as compared to the Asian conditions. However, the literature review was helpful in identifying 10 variables which were further evaluated in order to develop a conceptual framework. This study is an attempt to fill the gap in the available literature on the topic concerning India. Specifically, this paper intends to develop a conceptual framework for Credit Derivatives in the Indian scenario.

[C] PROBLEM STATEMENT

Despite the existence of credit derivative products namely credit default swaps, the corporate bond markets aren't picking up the way they should. It thus, becomes crucial to identify the chief components of the credit derivative eco-system and their inter-relationships so as to address the relevant issues plaguing the growth of corporate bond markets in India.

[D] RESEARCH OBJECTIVES

- 1. To study the growth and prospects of Credit Derivatives in India
- 2. To study the existing framework within which Credit Derivatives operate in India

- 3. To explore potential users of Credit Derivatives
- 4. To identify the correlations among various influencing factors contributing to the growth of credit derivative markets in India.
- 5. To propose a conceptual framework for growth of Credit Derivative markets in India with reference to the Corporate Bond Markets.

[E] RESEARCH HYPOTHESIS

 H_{01} : A significant number of respondents think that Credit Derivatives have tremendous growth opportunity in India.

 H_{02} : A significant number of respondents perceive Credit Derivatives as efficient instruments in managing credit risk.

*H*₀₃: *A significant number of respondents feel that they are under-utilizing Credit Derivatives.*

 H_{04} : A significant number of respondents are not comfortable using Credit Derivatives.

 H_{05} : There is no significant difference between the risk managed by credit derivatives and risk managed by other instruments.

 H_{06} : A significant number of respondents perceive that the existing framework within which Credit Derivatives operate in India is appropriate.

*H*₀₇: Credit Derivatives are useful for transactions involving large sums of money.

 H_{08} : The market in the past did not provide the necessary credit risk protection to banks and financial institutions.

 H_{09} : Credit derivatives are developed and are extensively used to provide a solution to the inefficiencies in the credit market.

 H_{010} : A significant number of respondents perceive that the considerable number of Commercial Banks, NBFCs and PDs allowed to buy and sell protection without having the underlying will cause the CDS market for corporate bonds to grow as a speculative market.

[F] RESEARCH DESIGN

In order to understand the factors affecting the dynamics of credit derivative markets in India the researchers have identified ten variables embedded in ten hypotheses; which in turn are measured through a set of questions.

Variable	Associated	Variable	Associated	
variable	Hypothesis	variable	Hypothesis	
Growth Opportunity	H _{O1}	Appropriate Framework	H _{O6}	
Efficient Product	H _{O2}	Useful for Large Sums	H ₀₇	
Under-Utilized	H _{O3}	Protects Credit Risk	H ₀₈	
Comfortable in Using	H _{O4}	Well Developed Product	H _{O9}	
Better Risk Mgmt	H ₀₅	Speculative Market	H _{O10}	

Table 1.2: List of variables used in the study

Hypothesis	Associated Question Statements
H ₀₁ :.A significant number of respondents think that	1. Credit Derivatives have tremendous growth
Credit Derivatives have tremendous growth	opportunity in India
opportunity in India	
H ₀₂ : A significant number of respondents perceive	1. Other products which can be used in place of
Credit Derivatives as efficient instruments for	Credit Derivatives are not as efficient as Credit
managing credit risk	Derivatives.
	2. Credit Derivatives are efficient instruments for
	managing credit risk.
	3. In terms of Cost-Competitiveness Credit
	Default Swaps are better placed than other instruments
	for hedging credit risk and related purposes.
H ₀₃ : A significant number of respondents feel that	1. As an organization we are under-utilizing credit
they are under-utilizing Credit Derivatives.	derivatives.
H ₀₄ : A significant number of respondents are not	1. I'm not very comfortable in using Credit
comfortable using Credit Derivatives	Derivatives
Hos: There is no significant difference between the	1. There is no significant difference between the
risk managed by credit derivatives and risk managed	risk managed by credit derivatives and risk managed by
by other instruments	other instruments
H ₀₆ : A significant number of respondents perceive	1. A vibrant Debt Market is a necessary pre-
that the existing framework within which Credit	requisite for a thriving Credit Derivative Market.
Derivatives operate in India is appropriate.	2. Credit Default Swaps in Corporate Bonds is a
	good start for the development of Credit Derivatives
	Market in India.
	3. A lot needs to be done in terms of regulation
	and infrastructure for the growth of Credit Derivative
	market.
	4. The existing framework within which Credit
	Derivatives operate in India is appropriate.
	5. Allowing "Users" to buy protection only if they
	hold the underlying corporate bond is a very limiting
	regulation on the part of RBI for the growth of CDS.
	6. It is O.K. to allow "Market Makers" to buy and
	sell cover through Credit Default Swaps without having
	exposure to the underlying security
H ₀₇ : Credit Derivatives are useful for transactions	1. Credit Derivatives are useful only for
involving large sums of money	transactions involving large sums of money
Hos: The market in the past did not provide the	1. The market in the past did not provide the

necessary credit risk protection to banks and	necessary credit risk protection to banks and financial					
financial institutions	institutions					
H ₀₉ : Credit derivatives are developed and are	1. Credit derivatives are developed and are					
extensively used to provide a solution to the	extensively used to provide a solution to the					
inefficiencies in the credit market	inefficiencies in the credit market					
H ₀₁₀ : A significant number of respondents perceive	1. With the considerable number of Commercial					
that the considerable number of Commercial Banks,	Banks, NBFCs, and PDs, allowed to buy and sell					
NBFCs and PDs allowed to buy and sell protection	protection without having the underlying; the markets					
without having the underlying will cause the CDS	for CDS in Corporate Bonds are poised to flourish on its					
market for corporate bonds to grow as a speculative	own as a speculative market					
market						

The responses were sought via a structured questionnaire using likert scale and the sampling frame used is as follows:

#	Respondents working with Banks and Financial Institutions:	210	
#	Debt Fund managers from Abroad - Mutual Fund Managers, Hedge Fund		
Manager	rs, Income Fund Managers working with Insurance Companies:	42	
#	Academicians in India and Abroad:		204

The reliability score for the Cronbach's Alpha was 0.472. It is slightly on the lower side. But the same can be taken as a result of high level of ignorance and familiarity among the respondents. A careful investigation suggests that the reliability coefficient for practitioners is satisfactory (0.748) but the overall reliability coefficient is lower because of lower degree of agreement among the academicians from India and abroad.

[G] DATA ANALYSIS USING CORRELATION AND INTERPRETATIONS

Table 1.4 Correlation Matrix

		H ₀₁	H _{O2}	H _{O3}	H _{O4}	H ₀₅	H ₀₆	H ₀₇	H _{O8}	H _O 9	H ₀₁₀
Hoı	Pearson Correlation	1	479**	.691**	.478**	.244**	.691**	.077	.836**	020	.657**
	Sig.(2-tailed)		.000	.000	.000	.000	.000	.102	.000	.677	.000
Har	Pearson Correlation	479**	1	008	691**	746**	282**	410**	697**	.293**	313**
1102	Sig.(2-tailed)	.000		.871	.000	.000	.000	.000	.000	.000	.000
Hoz	Pearson Correlation	.691**	008	1	.390**	.080	.451**	072	.605**	.276**	.475**
1105	Sig.(2-tailed)	.000	.871		.000	.087	.000	.127	.000	.000	.000
II.	Pearson Correlation	.478**	691**	.390**	1	.778**	.094*	.067	.598**	377**	.131**
1104	Sig.(2-tailed)	.000	.000	.000		.000	.045	.155	.000	.000	.005
Ho5	Pearson Correlation	.244**	746**	.080	.778**	1	.229**	.025	.396**	193**	.049
	Sig.(2-tailed)	.000	.000	.087	.000		.000	.599	.000	.000	.295
Hor	Pearson Correlation	.691**	282**	.451**	.094*	.229**	1	054	.481**	.351**	.387**
П 06	Sig.(2-tailed)	.000	.000	.000	.045	.000		.251	.000	.000	.000
Hoz	Pearson Correlation	.077	410**	072	.067	.025	054	1	.510**	.091	.316**
H 07	Sig.(2-tailed)	.102	.000	.127	.155	.599	.251		.000	.053	.000

Hos	Pearson Correlation	.836**	697**	.605**	.598**	.396**	.481**	.510**	1	057	.690**
	Sig.(2-tailed)	.000	.000	.000	.000	.000	.000	.000		.228	.000
Hog	Pearson Correlation	020	.293**	.276**	377**	193**	.351**	.091	057	1	.175**
	Sig.(2-tailed)	.677	.000	.000	.000	.000	.000	.053	.228		.000
H 010	Pearson Correlation	.657**	313**	.475**	.131**	.049	.387**	.316**	.690**	.175**	1
	Sig.(2-tailed)	.000	.000	.000	.005	.295	.000	.000	.000	.000	
**. Correlation is significant at the 0.01 level.											
*. Correlation is significant at the 0.05 level.											
											N = 456

CORRELATION ANALYSIS

<u>Analysis of correlation between *Growth Opportunity* for credit derivatives in India with other variables:</u>

Variables with Significant and High Correlation:

First up is the ability to protect credit risk (.836). Then there is a tie between the under-utilization of credit derivatives (.691) and the appropriate framework in India (.691).

Interpretation: The fact that credit derivatives are 'under-utilized' and the RBI 'framework is appropriate' have strong correlation with 'growth opportunity'. The growth of the credit derivatives market, to a large extent, rests on a RBI framework which enhances utilization of credit derivatives. It can be safely deduced that credit derivatives have tremendous growth opportunity in India and there is an increasing need to protect credit risk using credit derivatives.

<u>Analysis of correlation between *Product Efficiency* of credit derivatives with other variables.</u>

Variables with Significant and High Correlation:

There is no variable with a positive correlation. High negative correlation is seen with the risk management capability of credit derivatives (-.746). Next variable with negative correlation is credit derivatives as protectors of credit risk (-.697) followed with product efficiency (-.691).

Interpretation: Noticeably the only correlation visible is with the variable – credit derivatives are 'well developed products'. It is worth reemphasizing that the respondents agree that credit derivatives are efficient products and also that they are well developed.

Analysis of correlation between *Under-Utilization* of credit derivative products with other variables:

Variables with Significant and High Correlation:

High positive correlation is found with the variable – 'growth opportunity' of credit derivatives (.691). Next in line is the variable – credit derivatives 'protect credit risk' (.605).

Interpretation: It is imperative to manage credit risk in the present competitive environment especially in the light of the sub-prime aftermath. The very basic tenet for the growth of credit derivative is its ability to manage credit risk, which we have already seen. The increased utilization would help in better credit risk management and would imply growth of the credit derivative market.

Analysis of correlation between *Comfort in Using* credit derivative products with other variables:

Variables with Significant and High Correlation:

High positive correlation is found with the variable – credit derivative products are 'better in risk management' (.778). Next in line is the variable – credit derivatives 'protect credit risk' (.598).

Interpretation: Both the variables relate to credit risk management. It is imperative to manage credit risk in the present competitive environment especially in the light of the sub-prime aftermath. The increased comfort in usability would help in better credit risk management.

Analysis of correlation between credit derivative products as a *Better Risk Management Tool* with other variables:

Variables with Significant and High Correlation:

A high level of correlation is seen with the variable - 'comfortable in using' credit derivative products (.778).

Interpretation: As the respondents are not too comfortable in using credit derivatives they are also not in a position to evaluate if credit derivatives are better in risk management as compared to other alternatives.

Analysis of correlation between *Appropriate Framework* for credit derivatives in India with other variables:

Variables with Significant and High Correlation:

There is a high correlation between 'appropriate framework' and 'growth opportunity' (.691). Other variables with a reasonable degree of correlation are credit derivative products 'protect from credit risk' (.481) and they are 'under-utilized' (.451).

Interpretation: As stated earlier, a framework is a strong factor for the development of credit derivatives market. If the framework is good, it acts as an encouragement for the participants and thus the market grows.

Analysis of correlation between credit derivatives' *Usefulness for Large Sums* with other variables:

Variables with Significant and High Correlation:

Only variable that has some correlation is credit derivative products 'protect from credit risk' (.510).

Interpretation: Debt markets in India, is a big ticket game. It can be said that the markets are not growing as there aren't too many players. One reason is the minimum investment size, which is quite high. Given that credit derivatives are basically for portfolio managers and banks to manage their credit risk; it is obvious that it would involve large tickets. This is an independent variable with insignificant bearing on other variables.

Analysis of correlation between credit derivatives as a *Protector of Credit Risk* with other variables:

Variables with Significant and High Correlation:

A significantly high level of correlation is seen with 'growth opportunity' (.836). Then there are other factors like 'under-utilization' of credit derivatives (.605) and the 'comfort in using' credit derivative products (.598). **Interpretation:** As stated earlier, the fact that credit derivatives provides protection from credit risk; is the single most important factor for the growth of this market. It is vital for financial institutions to be careful with the exposure and the commensurate credit risk in their loan portfolios.

Analysis of correlation between credit derivatives as *Well Developed Products* with other variables:

Variables with Significant and High Correlation:

Though the variable has statistically significant correlations but none of them are high enough.

Interpretation: Credit Derivative products are developed and advanced. But this variable does not have substantial correlation with other variables. As a market ingredient, it is imperative to have a good product coupled with a good framework (with which this variable has the highest positive correlation, .351). With these two variables being together the markets are equipped to grow.

Analysis of correlation between credit derivatives as a *Speculative Market* with other variables:

Variables with Significant and High Correlation:

The highest correlation is seen with the variable that credit derivative products 'protect from credit risk' (.690). The second highest correlation is seen with the variable – credit derivatives have tremendous 'growth opportunity' (.657). Other than that a reasonably good correlation is seen with the variable – credit derivatives are 'efficient products' (.475).

Interpretation: One of the attributes of a market with tremendous growth opportunities is its varied uses. So on one side the market grows for the basic reason for which it came into existence. On the other side, there are supporting and other reasons for its growth. One strong reason for this market to grow can be attributed to the possibility of it growing as a speculative market.

SUMMARY OF FINDINGS

The summary of findings based on correlation analysis is tabulated below:

Variable	Highly Correlated with					
Growth Opportunity	Protects Credit Risk, Under-Utilized, Appropriate Framework					
Efficient Product	Better Risk Mgmt (- ve), Protects Credit Risk (- ve), Comfortable in Using (- ve)					
Under-Utilized	Growth Opportunity, Protects Credit Risk					
Comfortable in Using	Growth Opportunity, Protects Credit Risk					
Better Risk Mgmt	Under-Utilized, Efficient Product (- ve)					
Appropriate Framework	Growth Opportunity					
Useful for Large Sums	Protects Credit Risk					
Protects Credit Risk	Growth Opportunity, Efficient Product (- ve), Speculative Market					
Well Developed Product						
Speculative Market	Protects Credit Risk, Growth Opportunity					

[H] CONCLUSION & SUGGESTIONS

The Indian debt market is dominated by Government Securities. Obviously, with the Government as the issuer there is hardly any credit risk as it is sovereign. On the other hand, the biggest investors are commercial banks and it is well known that it is the state owned banks that hold a majority in the banking industry – with SBI and

PNB being the front runners. So, in a nut shell, the issuer is the Government and the lender is also a part of the Government. Clearly, there is no credit risk and thus no immediate need for hedging the same.

The corporates primarily avoid taking any debt. If at all they do, it is from the term loans where on most occasions the banks dictate the terms. In the absence of an active corporate bond market, the corporates are indeed helpless. The banks as well as the corporates are comfortable doing business as it has been in practice for a very long period of time. But it proves inefficient for corporates as well as banks depending upon the supply or demand needs of respective parties. Credit Derivatives is an answer to the said limitation.

After going into basics of the credit (debt) market in India, following model is proposed for growth of Credit Derivative markets in India.



Figure 1.1 Conceptual Framework for growth of Credit Derivative markets in India

DESCRIPTION OF MODEL

<u>Appropriate Framework</u>: RBI has already taken the initiative and the National Stock Exchange has already launched an online trading platform for corporate bonds. Presently single named CDS is allowed in the Indian Credit Derivative markets. The corporate bond markets have also been improving and the Government has been contributing by relaxing and thus pushing the corporates to use the bond markets for their funding needs. Banks on the other hand, have witnessed high provisioning which has curtailed their ability to lend.

Efficient Product: There has been enough research which establishes that Single named CDS are good instruments for transferring credit risk. RBI guidelines are comprehensive enough to prohibit any wrong use of credit derivatives. RBI has allowed only those entities to buy protection who have an exposure to the underlying.

<u>Better Risk Management</u>: Credit Derivatives help banks in managing their balance sheets. The asset continues to be in the books of the lender and still the lender can safeguard itself from potential ratings downgrade or default by taking protection from credit derivatives.

<u>Enhancing Usage Comfort through Training</u>: During data collection it was found that there is a huge shortage of trained personnel in the Indian credit derivative market. It is thus suggested that banks and regulators undertake several measures to improve upon the knowledge base so as to enable strong participation of banks and other financial institutions in the credit derivatives market. FIMMDA has already organized workshops on Credit

Default Swaps, but a lot more needs to be done. The biggest bank in India – SBI needs to play an active role by participating in the Credit Derivative market. This will be a huge confidence booster for the other relatively small banks.

Efficient Corporate Bond Markets: This can be construed as a chicken or egg situation as a developed bond market helps the growth of credit derivative market and a developed credit derivative market shall help the growth of an efficient corporate bond market. The major step, thus, is to help the corporate bond markets so that they are more active.

[I] LIMITATIONS OF THE STUDY

The identified variables have been an outcome of the literature review. It may be possible that certain variables were not covered.

Although, reliability statistics were quite reasonable with the Cronbach's Alpha at 0.472, there may be bias in the respondents' feedback.

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