

Future of CDS (Credit Default Swaps) in India - The Game Just Begins

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Abstract

The financial system of a country must be able to meet the diversified needs of a growing economy; it must actually encourage financial innovations. CDS are one of the innovative financial instruments used for transfer credit risks from banks and financial institutions. A major problem with CDS was the lack of transparency; they were unregulated too, during the times of financial crisis, CDS created confusion and encouraged excessive risk taking. The main reason for the global financial crisis was repackaging mortgage into mortgage backed securities called Collateralised Debt Obligations (CDOs), it should be recognized that innovative financial products hold dangers, if they are improperly used which would result in complexity of instruments and insufficiency of information, inappropriate risk assessment and inadequate regulation. It is therefore important to empirically identify and analyze the regulatory framework and its effectiveness on the CDS market accurately, so that it would be possible to find an appropriate answer to solve the same. It would in fact provide an opportunity for initiating further reforms in the financial sector and the regulatory policy reforms required to be put in place with a view to preventing such future financial calamities in India. For this purpose, two objectives are set for the study. The first objective is to analyse the adequacy of current regulatory framework governing to CDS in India and the second objective is to identify the future market potential of CDS in India.

Key words: CDS, CDOs, Regulatory Framework, Market Potential, Derivatives, Global Financial Crisis, Risk Assessment, Knowledge and Awareness

1. Introduction

The fast changing financial environment through globalization, liberalization and privatization has opened up a new method of financial transaction where risk level is very high. Financial innovations occur because market participants are constantly searching for

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new ways to make greater profits. The process of “financial Innovation” includes change in financial instruments, institutions, practices and markets. The most popular and innovative credit derivative instrument is CDS. CDS is considered as the “engine of financial growth” because through CDS, one can have greater access to capital markets, lowered transaction costs and allow risks to be shared more widely. In fact, CDS makes the financial market highly interconnected; i.e., money moves from where it is less useful to where it is more useful.

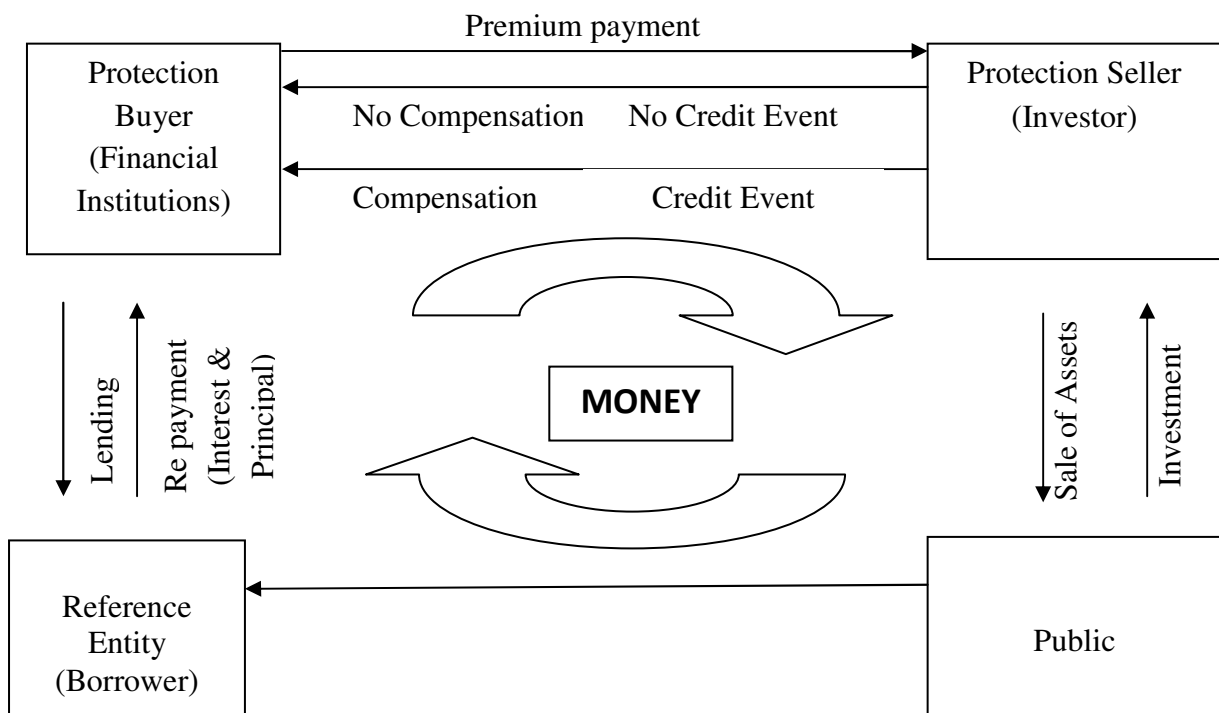
1.1. Credit Default Swaps (CDS)

CDS are derivative contracts between two parties in which the protection buyer makes periodic payments to the protection seller. CDS as a contract provides insurance against the credit risk of default by a particular company. The settlement in the event of default involves either physical delivery of bonds or cash payments. CDS is an innovative credit derivative and an efficient instrument that became extremely popular in the last decade which allowed banks and financial institutions to transfer credit risk and enhance capital, which can be used for productive purposes. The lessons of the global financial crisis drove the financial experts to revise the regulatory framework governing derivative instruments especially in CDS.

1.2. CDS Mechanism

The Protection Buyer negotiates a CDS contract with the Protection Seller and pays a premium spread to the Protection Seller until the end of the life of the CDS or until a credit event occurs whichever is earlier. These payments are typically made in arrears every quarter, every half year or every year. The settlement in the event of default involves either physical delivery of bonds or cash payment. The premium spread depends on the risk of the reference entity. If credit event occurs, the protection seller makes a contingent payment to the protection buyers. Since the credit event has occurred the buyer stops making the quarterly payment of the premium to the seller of protection.

Figure 1: Illustration of the working mechanism of CDS



Advantages of using CDS is that it allows parties to efficiently manage their exposure to credit risk. By isolating specific aspects of credit risk, credit derivatives allow the transfer of even illiquid credit exposures.

2. Objectives of the study

The objectives of the present study are as follows:

1. To analyze the adequacy of current regulatory framework governing CDS in India
2. To identify the future market potential of CDS in India

3. Review of Literature

Rene. M. Stuiz (2010) showed that financial derivatives increase economic welfare by facilitating risk sharing among investors by improving price discovery and making the allocation of capital more efficient. He states that global financial crisis was not caused by CDS; they were primarily driven by investors and financial institutions which did not expect the real estate prices to fall dramatically. He concludes that derivatives especially, credit default swaps contributed significantly to social welfare and played a positive role in the economic growth.

Virginie Coudert, Mathieu Gex (2010) examined that all financial derivatives have been designed for hedging risks, but in practice they are widely used for speculation. It is discussed that the regulatory measures are being designed in collaboration with industry in order to ensure better market practices and higher risk management standards.

C. Peter J. Wallison (2009) revealed that there are so many potential culprits in a financial crisis. But almost every media report mentioned that the oddest target is CDS as one of the contributing causes of the financial crisis. He explains many myths about CDS and concludes that failure of CDS is mainly because of misunderstanding of how CDS works.

Anne Tjuquerroy, Mathieu Gex et.al (2009) reported that it is important for regulators to govern the CDS market. Such an initiative contributes to the ultimate objective of financial stability and improves the transparency of the CDS market. The regulators however face major challenges. To overcome the challenges, they encourage market participants to clear CDS via central counter parties. Further, counterparty risk in the CDS market is assessed for greater transparency of transaction. This way one can detect and prevent systemic exposures. Hence, only the standardized contract should be encouraged.

Andre Scheerer (2000) pointed out that the credit derivative activity is subject to supervision by federal banking supervisors. Both dealers and end users in the United States must integrate their internal risk management processes and banks must be aware of regulatory capital implications before entering into credit derivative activities.

Oscar Arce, Javier Gonzalez Pueyo, et.al (2010) examined the recent proposals and deficiencies in the CDS markets. So, it is important that the CDS transaction is subject to appropriate requirements of supervision, capitalization and transparency. The group of G20 agreed and proposed that all standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, cleared through CCP and the contract should be reported to trade repositories. They conclude that the regulatory amendments help to increase the transparency of the transaction, better supervision, more efficient price formation and help reduce counterparty risk.

Kamera Levin (2008) in his study opined that the objective of the new regulatory framework is to improve trading infrastructure, reduce the potential for systemic risk and improve transparency in the market. The CDS is required to trade on an organized exchange through a centralized counterparty. In addition, ISDA (International Standard Derivatives Association) takes an active role in promoting continuing public education with respect to CDS.

4. Data and Methodology

4.1. Data

A well structured questionnaire was used for the study were collected information from the focus group of financial experts in the field of derivative instruments especially on CDS. Questions were asked at a macro level covering the various aspects of current regulatory framework and variables related to future market potential of CDS in India. The response then was circulated among members of the focus group. The members from focus group were drawn from the different financial services sector organisations like commercial banks, insurance companies, investment banks and other service providers in Chennai city. The study was undertaken for a period of one year from June 2012 to May 2013

4.2. Sampling

Convenience sampling technique was used for the study. Of the total questionnaire 672 circulated, 526 were collected complete in all respects. From the collected questionnaires 26 responses which were not fit for the study were excluded and the remaining sample size of the study is 500.

4.3. Statistical Tools

The standard statistical tools were used to analysis the collected data. The tools such as, Factor Analysis, t-test, ANOVA and Regression Analysis were applied with the help of SPSS, which resulted in varied observations and interpretations regarding on the regulatory framework and future market potential of CDS in India.

4.4. Questionnaire

The primary data were collected through questionnaire survey. For this purpose, the questionnaire was designed to contain three sections. Section I comprises optional type of questions, whereas sections II and III were designed in likert's five-point scale ranging from SA: Strongly Agree, A: Agree, U: Undecided, DA: Disagree, and SD: Strongly Disagree. The second part comprises questions on the current regulatory framework governing CDS in India and the final part encompasses statements related to the future market potential of CDS in India. The questionnaire with covering letter was handed over to respondents with a request to return the questionnaire filled in within 15 days.

5. Regulatory framework governing CDS market in India

The Reserve Bank of India originally proposed the introduction of CDS in the year 2007 in the Indian financial market but delayed its plans due to the financial crisis in 2008, RBI finally published the draft report on the introduction of CDS for corporate bonds on its website on August 4, 2010 and subsequently its final report on February 23, 2011. Credit derivatives were introduced from November 2011 in India in the name of Plain Vanilla Single Name CDS for corporate bonds.

Credit derivatives are an important focal point for the International Swaps and Derivatives Association (ISDA), which provides standardized documentation for swaps and other derivatives transactions. ISDA's Master Agreements and derivatives documentation have

resulted in the standardization of many derivatives attributes in over-the-counter trading. The present regulatory and reform efforts may not remove the systemic risk from OTC derivatives but rather shift them from banks to Central Counterparties (CCPs) which could make the OTC derivatives market safer, particularly in the transition to a stable clearing infrastructure (Manmohan Singh, 2011)

6. Analysis and Discussion

The primary data analysis is carried out on the basis of responses received from the financial experts on the derivative instruments, CDS.

6.1. Regulatory Framework

For the purpose to analyze the adequacy of current regulatory framework governing CDS in India, the researcher carried out factor analysis and applied parametric t-test. Factor analysis is a branch of multivariate analysis that is concerned with the sharp internal relationship of a set of variables. This is the principal component method applied for data reduction process, through which the numerous variables could be seen as approximately explaining a single factor. The basic utility of a t-test is that it produces a straight forward and easy to interpret results of significance. The parametric t-test is found suitable to ascertain the perception of financial experts towards regulatory framework governing CDS in India.

Table 1: KMO and Bartlett’s Test with approximate Chi-Square

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.544
Bartlett's Test of Sphericity	Approx. Chi-Square	4529.200
	Degree of freedom	15
	Significance	.000

Source: Computation by the Authors

It is understood from Table 1 that KMO measure of sampling adequacy is 0.544 and Bartlett’s test of Sphericity is 4529.200. These values are statistically significant at 5 percent level. It shows that the sample size is adequate for the data reduction process. The communality shows that 18 variables disclose the variance ranging from 41 percent to 72.2 percent which is above the benchmark of lower limit 40 percent. Therefore, the data reduction is having a significant effect and it can be considered for further analysis. From the total variance analysis, it is found that the eighteen variables which are reduced into four predominant factors with individual variance. The total cumulative value of the variance is 57.428 percent which is statistically significant at 5 percent level

Table 2: Regulatory Framework Governing CDS in India- Factor Analysis

Factor	Variables	Variance
Market Participants	Users not permitted to sell the protection but permitted only to buy CDS	.840
	Market makers permitted to both buy and sell the protection	.644
Product Requirements	The protection buyer and protection seller must be the resident entities	.697
	CDS can be written only on listed corporate bonds as reference obligations in India, even for other than infrastructure companies	.666
	Entities must have strong financial and robust risk management practices to act as market makers	.656

	CDS also permitted on securities with original maturity up to one year like commercial paper, certificate of deposits and non-convertible debentures	.614
	The CDS contract shall be denominated and settled in Indian rupees	.496
	All CDS trades shall have an RBI regulated entity at least on one side of the transaction	.494
Documentation	All CDS trades will be required to be reported to centralized trade reporting platform	.802
	FIMMDA shall devise the master agreement for Indian CDS	.802
	Central Counter Parties (CCP) can aid market liquidity and reduce systemic risk	.783
	Market participants shall use FIMMDA published daily CDS curve to value their CDS positions	.780
	FIMMDA may take an active role in coordinating market initiatives	.678
	FIMMDA may form a determination committee of dealers and investors	.607
	Banks may submit the board approved policy and the date of commencement of CDS trading	.538
Settlement Methodologies	Market makers can opt for any of the settlement methods physical, Cash and auction	.622
	Physical settlement is mandatory for users	.539
	Credit event is defined based on the ISDA Master Agreement	.468

Source: Computation by the Authors

Table: 2 explain as to how the factors have been named?

Factor 1 is named as “**Market Participants.**”It comprises of two variables that is, the participants in CDS market may be categorised as market-makers who are permitted to both buy and sell protection and users who are not permitted to sell protection but are permitted only to hedge the underlying risk by buying protection.

Factor 2 suitably named as “**Product Requirements**”It consists of six items and the single-name CDS on corporate bonds should satisfy the above requirements variables that issued by RBI.

Factor 3 is called as “**Documentation** “and it is made up of seven variables such as, market organisations like Fixed Income Money Market and Derivative Association (FIMMDA) in association with ISDA may devise a master agreement for Indian CDS. The users and market makers should consult their legal experts about adequate documentation and other legal requirements on issues concerning credit derivative contracts before engaging in any transactions.

Factor 4 is termed as “**Settlement Methodologies**” whether it has three items which market makers can opt for any of the settlement methods physical, cash and auction, Physical settlement is mandatory for users and the credit event is defined based on the ISDA Master Agreement.

From the parametric t-test on regulatory framework on CDS in India, it is found mean values of the 18 variables range from 2.8060 to 4.2560. Similarly, the standard deviation also ranges

from .51605 to 1.26281. This leads to the computation of appropriate standard error and t-statistic to exactly ascertain the perception of respondents towards regulatory framework governing CDS in India. It is found that t-values (30.985, 57.716, 15.008, 16.794, 18.778, 25.246, 28.962, 2.701, 4.427, 21.007, 16.973, 21.847, 18.554, 20.427, 13.884, 16.461 and 25.122) are positive and t-value (-3.716) is negative are statistically significant at 5 percent level. Therefore, it can be concluded that the respondents strongly agree that variables such as centralised trade, following regulation and market maker can opt both buy and sell CDS. Similarly, the respondents moderately agree that the regulatory framework pertaining to CDS in India i.e. committee formation, CDS agreements under prescribed form, restriction on selling the CDS by user and settlement through centre counter parties. Finally, the financial experts disagree with the statement that the CDS contract shall be denominated and settled in Indian rupees

6.2. Future market potential of CDS in India

Derivatives products provide certain important economic benefits such as risk management or redistribution of risk away from risk-averse investors towards those more willing and who are able to bear risk. In India, the OTC derivatives markets will grow fast after the global financial crisis is over. Regarding the introduction of new derivative products for credit risk transfer, the recent announcement by the RBI that it would introduce credit default swaps is a welcome step. The CDS has to be traded through a well-defined platform, centralized counterparty and monitored its post-trade activities facilitates better surveillance of the financial market. Strengthening the position of the Clearing Corporation of India Ltd. (CCIL) as the only centralized counterparty for Indian OTC derivatives market and better supervision of the off-balance sheet business of financial institutions are two important issues concentrated by the RBI. At this juncture, it is very important to identify the future market potential of CDS in India, so that it would be possible to implement CDS in effective manner and for this purpose, the authors employed the statistical tools such as factor analysis and t-test.

Table 3: KMO and Bartlett's Test with approximate Chi-Square

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.777
Bartlett's Test of Sphericity	Approx. Chi-Square	2020.213
	Degree of freedom	55
	Significance	.000

Source: Computation by the Authors

From Table 3, it is found that KMO measure of sampling adequacy is 0.777. Bartlett’s test approximate chi-square value is 2020.213 are statistically significant at 5percent level. Hence, factor analysis is considered as an appropriate technique for further analysis of data.

It is evident from the communalities that the values of 11 variables range from 44.7 percent to 69.7 percent, which is the above the bench mark of 40 percent. Therefore, it is concluded that the data reduction process is significant at 5 percent level. From the total variance explained on the future market potential of CDS, the number of factors is that 11 variables are extracted into 3 predominant factors with individual variance. The total cumulative value is 61.117 percent; this is statistically significant at 5 percent level. Therefore, it is concluded that the variables are significant for further analysing the future market potential of CDS in India. The identified factors with the associated variables and factor loadings greater than or equal to 0.5 are given in the Table 4

Table 4: Future market potential of CDS in India- Factor Analysis

Factor	Variables	Variance
Risk and Return	CDS is an effective risk management tool in banks and financial institutions	.776
	Research is needed to analyze the contribution of CDS and used as a potential risk management tool	.759
	Many investors perceive that CDS is too risky and complex	.743
	CDS provide an opportunity for portfolio diversification and increasing its returns of financial institutions	.712
Transparent Regulation	Present regulation for CDS in India is satisfactory	.819
	Creation of exclusive CDS market is the need of the hour	.795
	Electronic reporting enhances liquidity and transparency of CDS transactions	.729
Knowledge and Awareness	Removal of current negative images from the minds of investors is required to develop market for CDS faster	.688
	Greater investor awareness is essential to develop CDS in India	.633
	Training program is necessary to educate about the use of CDS instruments	.590
	Lack of awareness about the existence of centralized counterparty for easy liquidity	.568

Source: Computation by the Authors

Therefore, the above 11 variables are explained in 3 predominant factors. They are as follows:

*** Risk and Return**

The credit risk management is a major area of concern for financial stability. Credit derivatives will help banks in India to transfer credit risk and hence free up capital resources. Derivative instruments are perceived to be risky, thus investors’ risk tolerances and their risk-return profiles play an important role in deciding whether or not to use derivatives in their portfolios.

*** Transparent Regulation**

Availability of information and transparency of price determination are important for all asset classes. It becomes even more important in the case of derivative instruments. Without an understanding of markets, derivative investment will be very risky and can become very costly for investors. Investors can make use of derivative instruments effectively, only if they understand the market dynamics and have the necessary technological tools and information available to use them

*** Knowledge and Awareness**

Without proper knowledge about financial markets and the products offered in these markets it is impossible to make a wise investment decision. There could be additional and improved rules and regulations, if investors are not aware of what they trade even the best rules and regulations cannot prevent them from losses and wrong investments. So if increasing awareness and knowledge about the instruments would have much greater scope for success of this innovative financial product in the financial market in future.

From the parametric t-test analysis, it is found that the mean values of the 11 variables range from 3.4660 to 4.3080. Similarly, standard deviation ranges from 0.77401 to 1.12949 with respective changes in standard error. This leads to the computation of t-statistics it is found

that t values (32.644, 28.938, 27.685, 24.648, 34.956, 20.030, 24.096, 21.752, 31.568, 10.031 and 13.898) are positive and statistically significant at 5 percent level. Therefore, it can be concluded that the financial experts strongly agree that the variables pertaining to future market potential of CDS in India such as portfolio diversification, need for research, electronic reporting, awareness and training program and they moderately agree for the following variables: CDS is too risky and complex, negative images of CDS, present regulation and creation of exclusive CDS market.

The analysis of variances is undertaken between dependent variables such as reasons for regulatory framework and future market potential for CDS and independent variables such as organisation profile of the financial experts.

7. Experience in Financial Service sector

In this study, there are four segmentation of experience viz, up to 5 years, 6 to 10 year, 11 to 15 years and above 15 years are considered as independent variable and it influence over the factors on CDS are estimated through one way analysis of variance.

Table 5: One way ANOVA between Experience in Financial Service Sector and Dependent Variables

CDS	Source	Sum of Squares	df	Mean Square	F	Sig.
Regulatory Framework	Between Groups	0.890	3	.297	1.792	.148
	Within Groups	82.080	496	.165		
	Total	82.970	499			
Future market potential	Between Groups	12.650	3	4.217	15.403	.000
	Within Groups	135.780	496	.274		
	Total	148.430	499			

Source: Computation by the Authors

From Table 5, it is found that there is difference between groups of respondents belonging to the years of experience in the financial service sector. Future market potential of CDS in India (F=15.403, P=.000) is statistically significant at 5percent level. Their difference in perception is estimated through mean comparison. Additionally, it is observed that the experience in financial service sectors is not having any significant impact on the current regulatory framework governing CDS in India at 5 percent level.

It is concluded that the year of experience in financial services sector determines the different opinion about the future market potential of CDS in India. Experts in the group of above 15 years of experience in the financial service sectors strongly agree with the following variables: electronic reporting, knowledge and awareness, transparent regulation and creation of exclusive CDS market in India. These variables are very important to develop the future market potential of CDS in India. The remaining groups moderately agree the same variables.

8. Experience with Derivative Products

Experience is the accumulation of knowledge or skill that results from direct participation in the activities. So, experience on derivative products helps the respondents to earn profit during currency exchange rate shifts, changes in the global supply and demand for commodities and interest rate fluctuations.

Table 6: One way ANOVA between Experience in Derivative Products and Dependent Variables

CDS	Source	Sum of Squares	df	Mean Square	F	Sig.
Regulatory Framework	Between Groups	13.061	3	4.354	30.888	.000
	Within Groups	69.909	496	.141		
	Total	82.970	499			
Future Market Potential	Between Groups	16.752	3	5.584	21.033	.000
	Within Groups	131.678	496	.265		
	Total	148.430	499			

Source: Computation by the Authors

In Table 6, it is shows that frequency of adoption of techniques for appraisal of regulatory framework (F=30.089, P=.000), and future market potential of CDS in India (F=21.033, P=.000) are significant at 5 percent level.

It is observed that the respondents with experience in derivative products express their opinion towards the regulatory framework governing CDS in India is rated strongly agree by the group of respondents i.e. 11 to 15 years and above 15 years, whereas others moderately agree about the factors such as market participants, product requirements and other documentation. In addition, it is found that all the group of respondents belong to the group derivative product experience. All the group of respondents who strongly agree the there exists a strong future market potential for CDS in India excepting the group i.e. 6 to 10 years of experience respondents in derivative product

9. Knowledge about CDS instruments

Knowledge is a familiarity with some or something, which can include facts, information, description or skills acquired through experience or education, so identifying the knowledge about the CDS instruments from the respondent is very important to develop the CDS market in India.

Table 7: One way ANOVA between Knowledge in CDS and Dependent Variables

CDS	Source	Sum of Squares	df	Mean Square	F	Sig.
Regulatory Framework	Between Groups	5.827	2	2.914	18.771	.000
	Within Groups	77.143	497	.155		
	Total	82.970	499			
Future Market Potential	Between Groups	7.728	2	3.864	13.649	.000
	Within Groups	140.702	497	.283		
	Total	148.430	499			

Source: Computation by the Authors

From Table 7 it is found that regulatory framework (F=18.771, P=.000) and future market potential of CDS in India (F=13.649, P=.000) are statistically significant at 5 percent level. The differences in the knowledge are sharply estimated through group mean comparison. Further, it is found that all the financial experts moderately agree on the adequacy of regulatory framework governing CDS in India. Finally, it is observed that the future market potential of CDS in India such as risk and return, transparent regulation, knowledge and awareness, are strongly agreed to, by the low-knowledge respondents and the remaining moderately agree.

10. Service provided by Organisations

The financial experts working from the different type of financial institutions and they are provided various financial services, this are classified into four groups, commercial banking, insurance, Investment banking and other service providers, are considered as independent variable and it influence over the factors of CDS is identified through one-way analysis of variances.

Table 8: One way ANOVA between Service Provided by the Organisation and Dependent Variables

CDS	Source	Sum of Squares	df	Mean Square	F	Sig.
Regulatory Framework	Between Groups	13.086	3	4.362	30.960	.000
	Within Groups	69.883	496	.141		
	Total	82.970	499			
Future Market Potential	Between Groups	11.083	3	3.694	13.341	.000
	Within Groups	137.347	496	.277		
	Total	148.430	499			

Source: Computation by the Authors

It is revealed in Table 8 that the respondents are differing in their opinion based on the services provided by the respective organizations towards CDS instruments. The regulatory framework (F=30.960, P=.000) and future market potential (F=13.341, P=.000) are significant at 5 percent level. Their difference in perception is estimated through mean comparison. And it is also clear that the respondents in the insurance service institutions strongly agree and all others moderately agree that the regulatory framework framed by RBI about the market participants in CDS, product requirements, documentation and settlement methodologies need further consideration.

Further, it is observed that the future market potential for CDS in India through the respondents opinion from the different services organisations, that respondents from the services belonging to insurance, investment banking, other service organisations strongly agree on the variables i.e. transparent regulation, knowledge and awareness, electronic reporting which enhance the future market potential of CDS in India, while the remaining respondents from commercial banking organisation (M = 3.8726) moderately agree on the different variables that influence the future market potential for CDS in India.

Through applying the regression analysis, the researcher sharply estimates the influence of current regulatory framework governing CDS in India on the future market potential for CDS in India. Therefore the regression analysis is used to sharply estimate their influence.

From model summary, it is found that the R = 0.664, R square = 0.415, and adjusted R square = 0.411. This reveals that independent variables of the current regulatory framework such as market participants of CDS, product requirements, documentation and settlement methodologies create 41 percent influence over the future market potential of CDS in India. The regression fit estimated through the ANOVA is shown in Table 9

Table 9: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	61.638	4	15.410	87.886	.000(a)
	Residual	86.792	495	.175		
	Total	148.430	499			

Source: Computation by the Authors

From Table 9, it is found that $F = 87.886$, $P = .000$ is statistically significant at 5 percent level. This shows that the independent variables of regulatory framework contributed significantly in the future market potential of CDS in India. This leads to the sharper estimation of individual influence of the current regulatory framework governing CDS in India.

Table 10: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	1.050	.182		5.774	.000
	CRF Market Part.	-.005	.022	-.009	-.250	.803
	CRF Prod. Requ.	.311	.037	.331	8.327	.000
	CRF Documentation	.351	.042	.321	8.575	.000
	CRF Settle Method	.135	.028	.190	4.872	.000

Source: Computation by the Authors

From table 10, it is found that the Product requirements ($t = 8.327$, $P = 0.000$), Documentation ($t=8.575$, $P=0.000$) and settlement methodologies ($t=4.872$, $P=0.000$) are statistically significant at 5 percent level. While the market participants ($t = 0-.250$, $P = 0.803$), it shows that not significant at 5 percent level and the regulation relating to market participants on CDS not influencing the future market potential of CDS in India. The t value of regulation relating to documentation is more than the other variables. Hence, it can be concluded that the regulatory framework relating to documentation of CDS is crucial for shaping the future market potential of CDS in India.

11. Findings

From the factor analysis, it is found that the 18 variables grouped into four different factors related to regulatory framework governing CDS in India and the future potential of CDS in India contains 11 variables that are grouped into three factors. The t-test reveals that the executives strongly agree on the variables such as, centralized trade, strict follow up the regulation and market can opt both buy and sell the CDS, and these are come under the head of regulatory framework governing CDS in India. Likewise, the respondents strongly agree on the variables that appropriate to the future market potential of CDS in India, they are portfolio diversification, research requirements, electronic reporting, awareness and training programs.

From ANOVA, is found that the sample respondents belongs to the group of above 15 years experience in the financial service sectors and derivative products strongly agree on the different variables of future market potential and regulatory framework governing CDS in India. It is also found that except the groups from 6 to 10 years, all other group of

respondents from experience in derivative products strongly agree on the variables of future market potential of CDS in India. Further, it is found that the respondents who have low knowledge convey their opinion about the variables strongly agree it is applicable to the future market potential of CDS in India. It is also found that all the groups that include high, moderate and low knowledge respondents are moderately agree the variables relating to current regulatory framework governing CDS in India. Finally it is found that except the respondents from commercial banking organization all others are strongly agree the variables pertain to future market potential of CDS in India. In addition it is observed that only the respondents from insurance service sectors are strongly agree and others are moderately agree the variables connecting to regulatory framework governing CDS.

Through the regression analysis it is found that the regulatory framework governing CDS in India influence 41 percent over the future market potential of CDS in India. The regulation regarding market participants on CDS is not significant and finally it can be concluded that the regulation relating to documentation of CDS is very important variable to determining the future market potential of CDS in India.

12. Conclusion

This study is of paramount importance particularly in the wake of global financial crisis 2007-2009, and because of the fact that the CDS can be used as an effective risk management tool to transfer the risks by the banks and financial institutions. But many observers and researchers blame the derivative instruments especially CDS that they are the main root cause of the global financial crisis. In this context, the research on the CDS is very important for further development of the financial market in future. Although, RBI introduced the CDS instruments in November 2011 to transfer and effectively manage the credit risk of the banks and financial institution, it has not reached the market participants, and most of them do not know how it works, and what benefits arise from the CDS instruments. In this scenario, it is very important to consider the different ways to enhance their level of knowledge and then create awareness and to inform the usefulness of the CDS instruments. Encouraging to the market participants to involve in the CDS transaction helps in the development of the CDS market faster in India. The outcome of the study can be used by the regulatory authorities to develop proper legal framework that could effectively regulate CDS products in the Indian financial market. However, the framework of CDS needs to be improved to provide better transparency and information. In India, effective steps must be undertaken by RBI in order to bring transparency in CDS transactions.

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