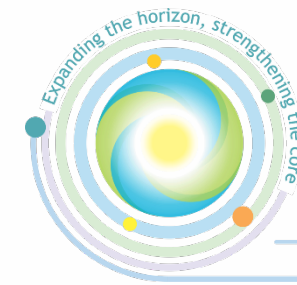




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**20<sup>th</sup> Global  
Conference of Actuaries**  
4<sup>th</sup> - 6<sup>th</sup> March, 2019 | Mumbai, India

## New Credit Risk Management Framework

Speaker(s)

**Mr. Shailesh Dhuri**

Executive Director

Decimal Point Analytics

Session # P11  
Dated 6<sup>th</sup> March 2019

# Credit Risk Management - Current Paradigms

## Corporate



Historical

Ratio Analysis

LGD/PD



Market

Credit Spread

KMVsqe



## Retail



Rule based approval based on basic financials



# Credit Risk - The Real Factors



# The Decoherence in Framework and Reality

## Corporate



Historical

Ratio Analysis

LGD/PD



Market

Credit Spread

KMVsqe

## Retail



Rule based approval based on basic financials



# The Decoherence in Framework and Reality

## Corporate



Historical

Ratio Analysis

LGD/PD



Market

Credit Spread

KM

## Retail



Rule based approval based on basic financials












Last period's output becomes this period's input

No explicit relationship to underlying credit risk process

As underlying credit risk process data is unstructured



# The Revolution - Explained in a Framework

	 Paintings	 PhotoFilms	 Digital Images
 Automated	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
 Digital	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
 Replication cost			
 Analysis of single image	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
 Analysis of all images for macro analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

# The New Risk Management Framework - Emerging Only Now



	Paintings	PhotoFilms	Digital Images
Automated	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Digital	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Replication Cost	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Analysis of Single Image	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Analysis of all Images for Macro Analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

# The New Risk Management Framework - Emerging Only Now

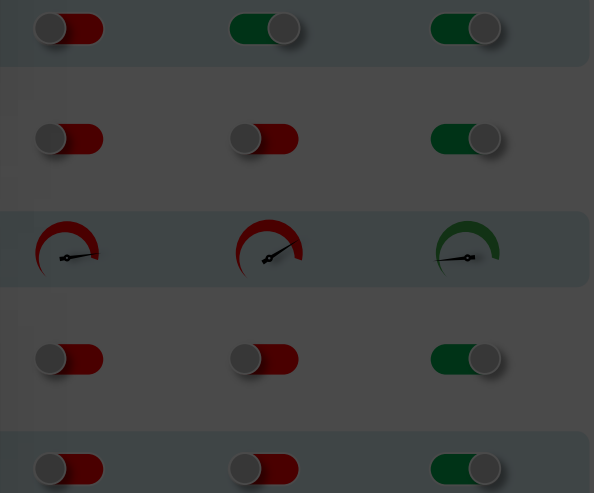
Now structure can be generated from unstructured data

Hence it is possible to build credit models directly from reality

New Paradigm is hard work, but will come into play in one decade



Paintings PhotoFilms Digital Images





# Synergistic Risk Management Framework - Some Components

## CoffeePulse

- Use machine learning based sentiment analysis of free flowing text and unstructured data to form unified, quantifiable view of commodity supply chain

## CreditPulse

- Use text of quarterly and annual filing to draw conclusions on credit risk of companies using deep learning
- A new paradigm of corporate credit risk scoring based on text

## ImagePulse

- Apply deep learning to photographs of households to estimate income for the household
- A new way of retail credit risk assessment to assist in financial inclusion with verifiable risk assessment

## NewsPulse

- Automated news gathering from deep web and sentiment analysis using machine learning
- Clients get upto 12x more news appropriate to the business risk on hand – for example assessing the business risk of tenants in a mall in a town

Decimal Point will, over time, as a pioneer, build unified credit risk framework directly from reality. It will change the way credit risk is understood across the world.



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THANK YOU

Date or any extra text highlight