

CRISIL - Risk & Analytics Overview

September 2017

Global Research
& Analytics

CRISIL
An S&P Global Company

CRISIL – An Introduction



Global Research and Analytics (GR&A)	Risk and Analytics	<ul style="list-style-type: none"> 17 of 31 BHCs in DFAST/CCAR 	<ul style="list-style-type: none"> Built/validated 1,600+ models in 2016 Review 20% of outstanding exotic derivatives annually
	Equity Research	<ul style="list-style-type: none"> 15 of Top 20 Global Investment Banks 	<ul style="list-style-type: none"> 3,300 global stocks under coverage, 450 stocks under small and midcap coverage
	Credit Risk and Research	<ul style="list-style-type: none"> 7 of Top 15 Global Banks 	<ul style="list-style-type: none"> Track credit quality of 3,400+ credits, 6000+ munis, 80+ sovereigns
	Coalition	<ul style="list-style-type: none"> 15 of Top 20 Global Investment Banks 	<ul style="list-style-type: none"> Provide deep analytical research on market peers, revenue opp., client wallets and market size
	Corporate Research	<ul style="list-style-type: none"> 50 Fortune 500 Companies 	<ul style="list-style-type: none"> Provided intelligence on over 11,000 global firms and insights on 70 sectors

Global Footprint and Support by Geography

- Research & Analytics Centres
- Relationship Offices
- ✉ Research analysts dedicated to clients by geography

Our structure allows us to serve global clients "round the clock"

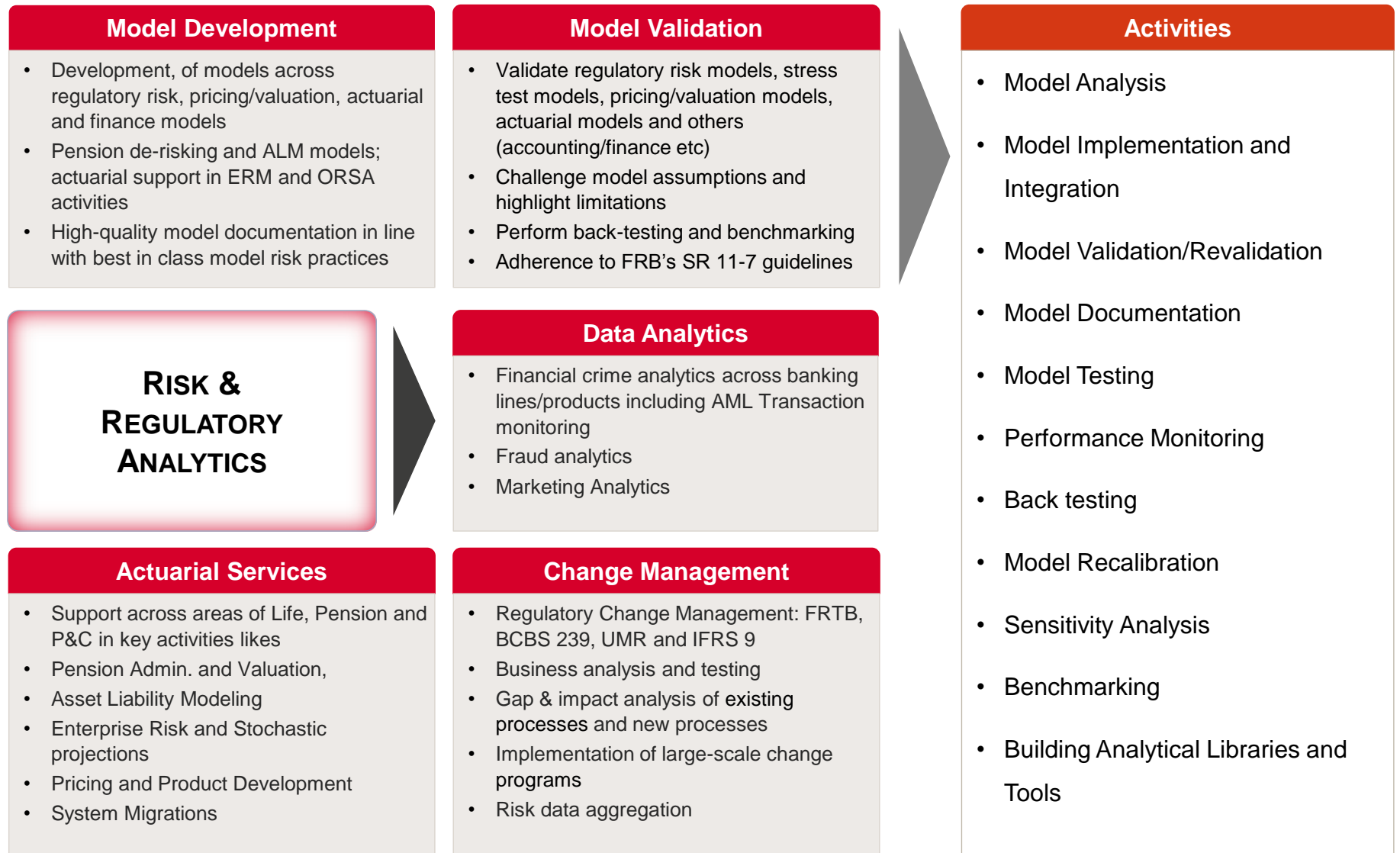


Over 2,800 highly qualified analysts provide round-the-clock support through research centres in Argentina, China, India and Poland

Some of our Clients in Risk and Analytics



Risk & Regulatory Analytics – Our Services



Risk & Analytics Quants – Team Profile

CRISIL GR&A's Risk and Analytics vertical has a deep and diverse talent pool of quants to support all our clients' needs across model risk management



We have experienced quants analysts with varied experience across Risk & Regulatory projects, Banking analytics, Derivatives pricing and Trading strategies



33% of our quants have 7+ years of experience and **~41%** analysts have 3-7yrs years of experience



26% of our quants are PhDs and **34%** are pursuing or completed specialized professional courses (FIA, FSA, IAI, CFA, CQF, MFE, FRM, ERP)



31% of our quants have qualifications from top universities and institutes in the US and UK



80% of our analysts possess a Master's Degree in a quantitative discipline - Mathematics, Statistics, Physics, Computer Science, Econometrics or Mathematical Finance



Our analysts possess experience in various valuation tools (FINCAD, NUMERIX), statistical packages (SAS, R, EViews, MATLAB) & programming languages (C++, Python)

Talent: Key Differentiators to Attract Superior Talent

Strong Brand Image

- Company of choice of people looking for analytical careers.

Global Diversity

- 4 research centres across India,
- 5 strategic international research centres – in USA, UK, Argentina, Poland & China

Innovation

- CRISIL Certified Analyst Program (CCAP), a work-cum-study programme aimed at developing financial analysts
- Pioneers in India in building a large talent pool for derivatives, risk and quant roles through our indigenous programmes

Academia Collaboration

- In India, CRISIL Doctoral Symposium is organized in collaboration with IIM A, B and C
- In India we conduct on-campus hiring for Actuarial Talent and expose our nurturing environment and actuarial policy
- In India, CRISIL Young Thought Leader (CYTL) is a competition to promote and recognize young thought leaders in university campuses
- In Poland, our quant course is a part of the Wroclaw University's curriculum
- In Argentina and China, we conduct training programmes and workshops in universities

Unmatched Career Opportunities

- CRISIL's multiple business units provide a variety of opportunities for its rich and diverse talent pool
- 5% of the global headcount is rotated every year across businesses

Winner of the Exemplary Talent Practices Award for “Talent Attraction”

Strong Campus Recruitment Program

Select Institutions that CRISIL GR&A Recruits from...

	ISI Kolkata		Indira Gandhi Institute of Developmental Research, Mumbai		Indian Institute of Science, Bangalore		Tata Institute of Fundamental Research, Mumbai
	Delhi School of Economics		Madras School of Economics		Chennai Mathematical Institute		Institute of Mathematical Sciences, Chennai
	IIM Ahmedabad		IIM Bangalore		IIM Kolkata		IIT Bombay
	IIT Guwahati		IIT Jodhpur		University of Wrocław		Wrocław University of Technology
	Universidad de Buenos Aires		Universidad de CEMA		Universidad de San Andrés		Universidad de La Plata

In-house Training – Sample Modules

Modeling Lifecycle & Process

- Model development lifecycle
- Different types of models and model risk
- Model validation process (as per SR 11/7 guidelines)
- Role and scope of model validation team
- Understanding model health statistics
- Benchmark & challenger models
- Documentation & validation reports

Credit Risk

- Approaches to measure credit risk
- PD, LGD and EAD Models
- Credit scorecard models
- Exposure to products e.g. HELOC, CRE etc
- Handling low default portfolios
- CCR – capital charges CVA and DVA
- Multi factor models incl. inter asset correlations

Techniques & Methodologies

- Probabilistic approaches
- Monte Carlo simulations
- Maximum likelihood, GMM techniques
- Logistic and Fractional Logistic regression models
- Cash flow simulation
- Time Series Modeling
- Machine Learning (ANN, SVM, RF)
- Factor analysis, PCA, Kalman Filters

Regulatory Framework

- Introduction to BCBS & Basel Accords
- Calculating RWA and CAR
- Capital Buffers and Liquidity Ratios
- Counterparty Credit Risk Framework
- Basel III Implementation and Challenges
- Introduction to CCAR / stress testing

Other Sample Modules

Bloomberg

Python/C++

SAS – Basic & Advanced

Advanced Excel/VBA

Introduction to R

Option Pricing

Securitized Products

Interest Rate Derivatives

Stochastic Calculus

Numerical Methods

Market Risk Modeling

Data Mining

Effective Report Writing

Effective Communication

Product Control

Thank You

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About CRISIL

CRISIL is a global analytical company providing ratings, research, and risk and policy advisory services. We are India's leading ratings agency. We are also the foremost provider of high-end research to the world's largest banks and leading corporations.

CRISIL is majority owned by S&P Global Inc., a leading provider of transparent and independent ratings, benchmarks, analytics and data to the capital and commodity markets worldwide.

About CRISIL Global Research & Analytics

CRISIL Global Research & Analytics (GR&A) is the world's largest and top-ranked provider of high-end research and analytics services. We are the world's largest provider of equity and credit research services. We are also the foremost provider of end-to-end risk and analytics services to trading and risk management functions at world's leading financial institutions and corporations. We offer corporate strategy, competitive intelligence and key account management support to corporations globally. We operate from research centers in Argentina, China, India and Poland, working with our clients across several time zones and in multiple languages. We are proud to be an organization that has the vision to proactively invest in its people and get them future-ready. We are committed to delivering cutting-edge analysis, opinions, and solutions. This underscores our proposition of "Making Markets Function Better".

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