Industry Expertise

	Mortgage and Fixed Income	Capital Markets	Modeling Focus
Risk Experience	**Loan Origination** • Application, credit decision and scorecards • Analytical solutions for risk assessment **Secondary Marketing** • Pipeline management • Best Execution analysis **Loan Servicing** • Master servicing and default asset management • MSR valuation analytics **Securitization and re-securitization** • Collateral valuation and exposure analysis • Ex post and ex ante loan-level risk analysis • Buy/Sell analytical due diligence **Portfolio Risk Retention** • All facets of analytical risk measurement • Advanced econometric tools for accurate risk decisions	**Risk Management** • Asset Liability Management • Liquidity management • Capital management • Hedging strategies **Portfolio Management** • Investment analysis • Performance attribution • Pricing and valuation **Fixed Income Investment** • Pre and post-trade analytics • Settlement and servicing **Financial Modeling** • Cash flow and prepayment • Credit risk • Prepayment risk	**Credit and Prepayment Risk** • Retail and Commercial loans • Structured Finance bonds MBS **ALLL Financial Modeling** • CECL Life of Loan modeling • ASC 450, 310-10-35 • Loss exposure modeling **Stress Testing** • Quantitative modeling • Macroeconomic variables • Scenario sensitivity **PPNR Modeling** • Non-interest income/expense • Time series statistical methods **BASEL and Economic Capital** • Modeling PD, EAD, LGD • Basel rules and requirements
In-House Models	**Mortgages, Loans, Assets, Pools, Portfolios** • Interest rates, prepayment, delinquency, default, loss, severity, PD, EAD, LGD, cash flow, valuation, price, stress testing **Scorecards** • Consumer credit, loan origination, performance, workout, risk mitigation **Methods** • Point-in-Time (PIT), Through-The-Cycle (TTC), OLS, logistic regression, discrete-time hazards, multivariate layered risks		
Vendor Models	**Mortgage** • AdCo Prepayment, AdCo LoanDynamics, Black Knight (AFT, LPS), CoreLogic LP Risk Model, Moody's RiskCalc, CMM and MPA, S&P Levels **Portfolio – Hedging – Trading** • QRM, Polypaths, INTEX, Blackrock Aladdin, Principia, Yieldbook, ZMdesk **Asset Valuation** • DebtX, MIAC Valuation, Trepp		