Analytics & Risk

BlackRock was founded by eight entrepreneurs who wanted to start a very different company. One that combined the best of a financial leader and a technology pioneer. And one that focused many diverse views on a singular purpose: to create a better financial future for our clients - companies, governments, and millions of individuals saving for retirement, their children's educations, and a better life.

Being part of BlackRock means being part of a community of smart, ambitious people. People who value diversity of thought, perspective and background, who believe everyone has a voice at the table. So, whatever your background, whatever you're studying, there's a place for you here.

FINANCIAL MODELING
Research and develop financial models

The Financial Modeling Group (FMG) is responsible for researching, designing and implementing the quantitative models used to assess financial risk across fixed income, derivatives, equities and multi-asset products. We work closely with the Portfolio Analytics Group to deliver analytical insights to investment and risk professionals at both BlackRock and external Aladdin clients.

PORTFOLIO ANALYTICS
Create and deliver analytics to help solve business problems

The Portfolio Analytics Group (PAG) within BlackRock Solutions creates and delivers Aladdin's analytical capabilities to help the firm and our clients understand and manage their investments and risk. Our group leverages financial expertise, technical skills and knowledge of the investment process to implement scalable solutions. Analysts develop a comprehensive understanding of finance, clients, and technology; they learn to navigate all groups at BlackRock to solve business problems.

RISK & QUANTITATIVE ANALYSIS
Manage BlackRock's fiduciary and corporate risks

The Risk and Quantitative Analysis (RQA) team provide independent advice and quantitative evaluations to lead BlackRock's management of its fiduciary and corporate risks. We apply statistical insights to our clients' portfolios and broad financial markets in order to form close advisory partnerships with investment teams and encourage best practice across the firm.

Financial Modeling

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The Financial Modeling Group (FMG) is responsible for researching, designing and implementing the quantitative models used to assess financial risk across fixed income, derivatives, equities and multi-asset products. We work closely with the Portfolio Analytics Group to deliver analytical insights to investment and risk professionals at both BlackRock and external Aladdin clients.

Our team is known for

- Owning and maintaining Aladdin's analytical core
- Leveraging sophisticated statistical techniques
- Using cutting edge "big data" tools
- Valuing complex securities via Monte Carlo simulation

As an analyst you will

- Solve business-critical problems by writing code
- Fire up the debugger to investigate production issues
- Explain complex models to non-technical end users
- Learn finance while doing engineering

Teams at a glance

Mortgage modeling

Analyze vast quantities of historical data to predict future borrower prepayment and default behavior.

Portfolio risk

Estimate range of outcomes for any investment from a stock, bond or swaption to an entire enterprise balance sheet all in terms of market risk factors.

Security valuation and term structure

Calculate prices and estimate risks for complex financial instruments by constructing models which combine techniques from mathematics, statistics and computer science.

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Portfolio Analytics

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The Portfolio Analytics Group (PAG) within BlackRock Solutions creates and delivers Aladdin's analytical capabilities to help the firm and our clients understand and manage their investments and risk. Our group leverages financial expertise, technical skills and knowledge of the investment process to implement innovative scalable solutions. Analysts develop a broad understanding of finance, clients, and technology; they learn to navigate all groups at BlackRock to solve business problems.

Our team is known for

- **Problem solving:** We partner with investments, risk and client-facing teams to understand their business problems and provide creative solutions using Aladdin analytics
- **Innovation:** We sit at the intersection of finance and technology. We conceptualize, design and implement new capabilities to ensure that Aladdin remains the best platform for clients to understand and manage portfolios and risk
- **Centralized & scalable operating platform:** Aladdin is a global investment platform that helps us solve problems in a scalable and efficient manner

As an analyst you will

- Gain a broad understanding of **analytics, markets, and Aladdins capabilities**
- **Utilize analytical models, reports and large scale data processing tools** to help clients manage their portfolio risk, exposure and performance
- Perform **special analyses in response to market events**, new business needs and client needs
- Contribute to the **creating, testing and roll-out** of financial models, analytics and reporting for new security types and products
- Provide **rapid response tactical solutions** leveraging critical thinking, programming skills and creativity
- **Engineer processes and enhance tools** to deliver analytics and support BlackRock's Aladdin technology infrastructure
- **Improve operational efficiencies** to enable scalable business growth

Develop a core skillset

As an analyst in PAG you will develop expertise in four core areas that will serve as the foundation for your career:

- Financial markets
- Clients/Industries
- Technology/ Aladdin
- Navigating BlackRock

Representative projects

Retail analytics capabilities

Developed a platform to deliver Aladdin risk analytics and capabilities to financial advisors allowing them to build better portfolios for their clients.

Industry peer risk analysis

Modelled suite of portfolios leveraging public data representing segments of the insurance industry. In depth analytics highlighted relevant trends enabling our client teams to deepen existing relationships and win new business.

Client implementation

Designed and implemented an analytical framework for a new Value at Risk model to satisfy regional regulatory guidelines to successfully onboard a new Aladdin client.

ECB asset quality review

Partnered with the Financial Modeling Group to analyze portfolios of European banks using data processing technologies (Apache Hadoop, MapReduce).

Risk & Quantitative Analysis

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The Risk and Quantitative Analysis (RQA) group develops and delivers tailored advice, risk management and investment system services to governments, corporations and many of the world's largest investors. The RQA team promotes BlackRock as a leader in risk management by providing top-down and bottom-up oversight to help identify investment, counterparty, operational, regulatory and technology risks. In addition to producing quantitative analysis to support BlackRock in managing its fiduciary and enterprise risks, RQA ensures that portfolio risks are consistent across mandates, reflect current investment themes within particular strategies, and comply with client-specific risk guidelines.

Our team is known for

- Integrity as a fiduciary to clients

- Unbiased insights into Financial Markets and Portfolios

- Critical independent thought leadership

- Partnering with the global investment teams in constructing portfolios that are consistent with specified risk and performance objectives

- Providing independent risk oversight for senior management of the firm and the board of directors

As an analyst you will

- Apply statistical techniques to real financial data and live portfolios to aid fund managers' real-time decision making

- Enhance processes and risk analyses to better align risk policies and methodologies with the client's objectives

- Learn to critique and exercise judgment around analytics, having developed a deep understanding of risk methodologies

- Learn to communicate complex ideas to key stakeholders in a high impact manner

- Facilitate risk and control self-assessments with the business.

- Provide independent and consultative risk management services to the business on a range of key projects including risk identification and evaluation of corresponding controls

Teams at a glance
RQA's activities can be divided into four teams:

Investment risk
Provides quant analysis on portfolios and markets to inform portfolio construction and risk taking decisions of the portfolio management teams.

Corporate operational risk
Identifies risks which directly impact the corporate entity

Responsible for all aspects of operational risk; error investigation, new product risk assessments and development of the operational risk framework.

Technology risk
Helps define and oversee BlackRock's technology controls to protect our clients and the firm.

Focuses on key risks such as technology outages, information security breaches and ineffective change management.

Counterparty & concentration risk
Focuses on identifying potential counterparty credit risks inherent to BlackRock and its clients.

Responsible for assessing, approving and monitoring the creditworthiness of all trading counterparties, as well as analyzing BlackRock's exposure to these entities.

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