# **Summary**

* The University of Chicago Booth School MBA in Finance, and GARP Certified FRM.
* Expert on derivatives valuation and risk analysis: e.g., MBS/CMO, options, futures, swaps, fixed income, equity index, energy futures & swaptions, and exotic barrier options & swaptions.
* Skilled in Python and Data Science/Data Analysis. See **datasciY.com** and **10SigmaRisk.com**.

# **Professional Experience**

**Owner and Founder, 10 Sigma Risk LLC Leesburg, VA 1/2011 – Present**

* Currently building Python Data Science models related to the financial industry.
* Crescat Capital LLC, a hedge fund – portfolio and operational risk consultant.

Client’s flagship Global Macro Fund returned 25.8% and 15.5% during my consulting period.

* Provided portfolio risk consulting services. Customize for each portfolio Bloomberg input parameters for Scenarios, VaR, Performance, and P&L Attribution. Review codes written by other programmers using Bloomberg DAPI and Excel-VBA. Explain risk and econometric concepts. Run ad-hoc statistical analyses. Monitor markets and produce risk reports. Discuss investment strategies with CIO and Investment Team.
* Produced operational risk management brochure, which Crescat is using in its due diligence package.
* Provided advice on operational risk, compliance, data backup, IT security, and website update.
* High net-worth investor – Provides on-going investment advice and analysis. Wrote reports on portfolio performance during the tech bubble. Client was very pleased with my analysis and guidance.
* Bio startup – Provided advice on the use of Monte Carlo simulations to analyze patient mortality risk.

**CEO and Co-founder, StockWiki Inc. Palo Alto, CA 1/2007 – 12/2010**

* Developed spreadsheet schema for DCF (discounted cash flow) analysis using “wisdom of crowds.”
* Hosted monthly developer group events in Palo Alto, California, for Google AppEngine developers.
* Provided business consulting services to finance related technology startups in Silicon Valley.
* Provided investment advice to high net-worth investors.
  + On March 5, 2009, correctly calling the bottom of the U.S. stock market, advised clients to invest in a stock portfolio of cash-rich companies, i.e., Apple, Google, Microsoft, and IBM. This portfolio returned 95% by the end of 2009, a 10-month holding period.
  + Next day, I invested my own funds in these stocks, which also returned 95% by year-end 2009.

**Database Consultant, Empower-VISA Services Inc. Fairfax, VA 5/2001 – 2/2008**

* Deployed FileMaker 8 database on Windows Server and Client computers.
* Created table schema, wrote SQL queries, and wrote scripts to automate report writing.
* Worked with users to improve user-interface designs, and trained users about data validation tools.

**Senior Manager, KPMG LLP Washington, DC 3/1997 – 5/2001**

* Promoted from Manager to Senior Manager in my first year of hire due to new clients I brought to the firm. I was in charge of new business development and managed about $1 million in annual consulting revenues.
* Managed staff on derivatives litigation consulting projects with over $100 million in damages (e.g., Boram Bank versus J.P. Morgan and Common Fund versus KPMG). Praised as the best expert among all parties in the J.P. Morgan case. Our lawyers used my analysis as prized tradable currency with other co-litigants.
* Due to my specialized SEC experience, I won the contract from the SIPC Board to analyze their SIPC Fund.
* Provided derivatives pricing, modeling, and risk management services to financial and energy clients.
* Financial Clients – Natl. Bank of Canada, Fuji Bank, IBJ, Dai-Ichi Kangyo Bank, HypoVereinsbank, etc.
* Energy Clients – TransMontaigne, Equitable Resources, Koch Industries, etc.

**Senior Derivatives Analyst, NERA White Plains, NY 8/1996 – 2/1997**

* Solved the key derivatives pricing issue on a 10-year long litigation case during the first conference call with lawyers. Client won an overwhelming victory in court that finally closed the case.
* Managed staff on derivatives litigation consulting projects with over $100 million in damages.

**Accountant-Economist, Financial Analyst, SEC Washington, DC 9/1992 – 6/1996**

* Received a rare merit bonus from the Director of Market Regulations in 1995, for my work on DPG Report and Bankers Trust enforcement case.
* Major contributor to DPG Report (Derivative Products Group) and author of market risk stress tests. Fought hard to get a robust list of stress tests included, along with industry’s preferred VaR models. The stress tests have stood the test of time, and they have become even more important to regulators.
* Primary expert on SEC enforcement actions (e.g., Bankers Trust and PaineWebber). After my answers during the Bankers Trust Wells hearing, the opposing legal team asked to adjourn. Two weeks later, the case was settled overwhelmingly in SEC’s favor.
* Examined hedge slippage risk of a $20 billion MBS/CMO trading book at Salomon Brothers.
* Predicted a $500 million loss risk at Merrill Lynch’s MBS/TBA trading book, several months before the event.
* During Orange County bankruptcy, monitored unwinding of $14 billion of counter-party credit risks.
* Led negotiations and provided financial analyses for no-action letter or rule revision issued on:
* Using portfolio-wide hedging for mortgage-backed securities net capital computation.
* Using binomial options pricing model for net capital computation by broker-dealers.

# **Education and Certification**

2010 – Present –- MOOCs and college classes for programming and math/statistics

2011 -- Global Association of Risk Professionals (GARP), Certified Financial Risk Manager (FRM)

1992 -- University of Chicago, Booth School of Business, M.B.A., concentrations in finance and econometrics

1986 -- Mount Holyoke College, B.A. with high honors, major in economics, minor in physics

# **Publication and Industry Reports**

Presented to the board of directors of Securities Investor Protection Corporation -

A Report on the Adequacy of the SIPC Fund (April 30, 1998).

Brandon Becker and Jennifer Yoon, Symposium: Derivative Securities: Derivative Financial Losses,

The Journal of Corporation Law (Fall 1995); 21 Iowa J. Corp. L. 215.

Drafted a list of stress tests for the DPG technical committee, which was wholly adopted in -

A Framework for Voluntary Oversight of the OTC Derivatives Activities of Securities Firms (1995).

Later the same list of stress tests were adopted by the BASEL committee and appear in –

The Market Risk Amendment (1996). And forms the basis of BASEL II’s market risk stress tests.

Submitted to the SEC a review of econometrics papers on market microstructures, which appear in –

Market 2000: An Examination of Current Equity Market Developments (1994).