Paul R. Teetor

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http://quantdevel.com/public

Education

- BS in Computer Science, Cornell University
- MS in Computer Science, Northwestern University
- MS in Applied Statistics, DePaul University

Publications

- *R Cookbook* (2011), O'Reilly Media
- *25 Recipes for Getting Started with R* (2011), O'Reilly Media

Professional Experience

Independent Consultant (Quant Development LLC) - 2010 to present

For a nation-wide bank and trust:

- Created a comprehensive toolkit for exploration and research of operational risk models (R)
- Converted a large body of operational risk models from SAS to R

For a money-center bank:

- Implemented a large-scale backtesting system for high-frequency trading algorithms (Python, Scala)
- Defined and evaluated trading signals for high-frequency trading (R, Python)
- Revived a break-out trading system and portfolio optimizer (R)

For a private investor:

- Incorporated interest rate factors and VIX into an equity futures trading model (R, Python)

DV Trading, Chicago - May 2014 to present

Futures trader and portfolio manager in proprietary trading shop. Researched, programmed, tested, funded, and executed portfolios of seasonal spread trades and mean-reverting spread trades.

Deerfield Capital Management LLC, Chicago - 1997 to 2003, and 2003 to 2008

DCM was a fixed-income investment manager. Most work was done with object-oriented Perl, Sybase SQL, C++, Excel, the R statistical system, and web technologies, using the Tech Hackers analytics library. Platforms were Windows, Solaris, and Linux.

Sr. Research Associate and Sr. Sys. Analyst

- Created a real-time analytics server for curve building, spreads calculation, spreads ranking, historical calculations, and other analytics.
- Designed and initially implemented an evaluation of credit default swap (CDS) portfolios using Monte Carlo simulations.
- Analyzed and implemented a model for overnight index swaps (OIS), including valuation and DV01 measures.
- Created an application which calculated Eurodollar hedges to maintain delta neutrality in a portfolio of swap spreads and TED spreads.
- Created a family of risk reports which monitored interest-rate exposure for cash instruments, swaps, futures, options, swaptions, and other derivatives.
- Implemented and maintained the library which embodied the corporate analytics for valuation and risk measurement.

Director of Research (interim)

- Formed new Research group and directed initial assignments. Managed staff of 3 research associates, performing research into fixed-income trading and risk management.

Systems Controller

- Responsible for administering company’s technology base, including Unix systems, Windows NT systems, and all telecommunications. Managed staff of 2 systems administrators.

Independent Consultant - 2003 to 2004
For a Chicago hedge fund:

- Converted Perl applications to C++. The applications performed valuation of exchange-traded and OTC fixed-income securities using a farm of Linux servers. Also, implemented a C++ interface to a large Sybase IQ server for mining tick-by-tick data.

For a Chicago hedge fund:

- Implemented a complete library of Perl objects for financial engineering applications, including security description and security analytics. Re-wrote several in-house applications to use the new library.

Fannie Mae, Washington DC - 1991 to 1997

- Technical lead on a team to modernize a fixed-income portfolio management system, including replacing the valuation model. All work done in C++, C, Pascal, SQL and HTML on Sun workstations and a Sybase backend.
- Technical lead on a team which implemented trading desk analytics for hedging sales of callable debt. All work done in C++ and HTML on Sun workstations.
- Software engineer on a team which implemented a system for entering MBS trades into a back-office database. All work done in C++, SQL and HTML on Sun workstations with a Motif GUI and a Sybase backend.
- Software engineer on a team which implemented a back-office system to process trades of mortgage-backed securities. Responsible for database-related tools and advising other programmers on programming for MS Windows. All work done in C++ and Sybase SQL on a network of PCs running MS Windows and Sun computers running Unix.
- Awards: Corporate Information Systems Excellence Award: Best Innovator (1996), Finance’s Finest

Award (1996)

Hull Trading Company, Chicago - 1988 to 1990

Consultant - 1985 to 1988

AT&T Bell Labs, Naperville IL - 1980 to 1985

Presentations, Articles, and Workshops

- “The Accidental Consultant” (AMSTAT News, September 2014)
- “What Can We Learn from Software Engineers?” (workshop, ASA Conference on Statistical Practice, New Orleans, 2015)
- “Introduction to R” (all-day workshop, Great Plains R User's Group, 2014)
- “Bootstrapping Time Series Data” (ASA Conference on Statistical Practice, Tampa, 2014)
- “Bootstrapping Seasonal Spreads” (lightning talk, R/Finance Conference, Chicago, 2014)
- "Introduction to R" (all-day workshops, Fin. Math. program, Univ. of Chicago, Sep 2013)
- “Fast(er) R Code” (lightning talk, R/Finance Conference, Chicago, 2012)
- “Better Hedge Ratios for Spread Trading” (lightning talk, R/Finance Conference, Chicago, 2011)