Kevin D. Duncan

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Employment

Sep. 2021 - *current*	Senior Economist	Credit Risk Modeling Branch, Federal Housing Finance Agency
July 2020 - Aug. 2021	Economist	Credit Risk Modeling Branch, Federal Housing Finance Agency

Education

2020	Ph.D.	Economics	Iowa State University
2015	M.Sc.	Economics	Iowa State University
2011	B.Sc.	Economics & Political Science	The George Washington University

Experience

Federal Housing Finance Agency

Led examination of FHLBanks collateral and securities valuation and haircut methodologies, unsecured counterparty methodologies, and member credit risk, including credit union, bank, and insurance company probability of default models.

Issued technical findings for improvement in FHLBank credit and collateral models, model risk management, and policies and procedures.

Conducted research into Value-at-Risk (VaR) estimation techniques, including technical issues in time series and panel data estimation of VaR, including estimation method comparisons and issues with simulation code in R.

Spearheaded the overhaul of a quarterly member credit report requiring SQL and Stata integration.

Ongoing research into the use of state-space methods to estimate VaR and Expected Shortfall using Bayesian methods in Stan.

Iowa State University

Completed research in the causal impacts of the Troubled Asset Relief Program on county level establishment entry, exit, employment expansion, and employment contraction using synthetic control, interactive effect difference-in-differences, and stepdown hypothesis testing.

Developed a novel joint hypothesis test for fixed effects when the dimension of the number of tested restrictions grows with the sample size under the presence of serial correlation.

Used ArcGIS to match every accident in Vermont from 2016 through 2018 to the nearest message board, estimated causal impacts of displayed messages using regression discontinuity designs in Stata.

Published an article evaluating the forecast performance of state level business climate indices as published by think tanks and professional organizations on future county and state level growth using a border-difference estimator.

Taught two sections of Econ 101 at a local Community College (Des Moines Area Community College)