

Davidson Heath

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Education

2010 – Present	Ph.D. Finance, USC Marshall School of Business
2007 – 2009	M.B.A., University of Chicago Booth School of Business
2000 – 2002	M.Sc. Mathematics, Queen's University
1994 – 1999	B.Sc. Biology, University of British Columbia

Working Papers

"Unspanned Macroeconomic Risks in Oil Futures" (2014) [Job Market Paper](#)

I construct a macro-finance model for commodity futures that admits unspanned macroeconomic state variables. There is a negative feedback relationship between crude oil prices and real economic activity, and a strong relationship between the cost of carry and physical inventories. The channel from real activity to oil prices is unspanned - that is, it is not identified in the contemporaneous futures curve - consistent with futures as a hedge asset against supply shocks. Unspanned macro risks have first order effects on risk premiums and real options values.

"Technology and Real Options: Evidence from Patent Text" (2014)

I measure firm-level innovation using the text of all U.S. patents from 1926 to 2010. Firms' technological position forecasts their future product market position. Greater technological differentiation is associated with higher total factor productivity, profitability, investment and market-to-book ratio. Consistent with a model of real options on heterogeneous assets, firms that are more technologically differentiated have lower stock returns and this effect is concentrated in small growth firms.

"Commodity Futures Forecast Returns and not Prices" (2013)

I construct a canonical affine model for commodity futures that includes many benchmark models as special cases. Model estimates provide strong evidence that the slope of futures prices reflects time varying risk premiums and not forecasts of future prices.

"Convergence Failure in CBOT Wheat Futures" (2009)

Massive convergence failures in CBOT agricultural contracts in 2007-2008 were caused by caps on the fees that storage providers could charge holders of delivery certificates.

Teaching

BUAD 306: Business Finance (38 students). Average evaluation = 4.7 / 5

TA for Ph.D. Empirical Asset Pricing (Wayne Ferson)

USC Marshall Ph.D. Teaching Award

Refereeing

Review of Asset Pricing Studies (RAPS), Quarterly Journal of Finance (QJF) , American Journal of Agricultural Economics (AJAE)

Conferences

Presenter: World Finance Conference 2013, "Commodity Futures Forecast Returns..."

USC Marshall Finance Ph.D. Conference 2013: Co-organizer, Head of Program Committee

Invited Participant: FRA 2014, FMA Doctoral Consortium 2014, NBER SI: Innovation, Economics of IT and Digitization 2014, NBER Commodity Markets 2013

Attended: WFA 2014, AFA 2014, AFA 2013

Nonacademic Employment

2005 – 2007 Vice President, Commodity Derivatives, BMO Capital Markets

2004 – 2005 Associate, Commodity Derivatives, BMO Capital Markets

2002 – 2004 Senior Analyst, Market Risk, BMO Capital Markets

Other

Coding: Python, Hadoop, R, Matlab, Stata, VBA

Hobbies: Skiing, Running, Golf, Scotch