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.

"Product Market Momentum" (2013)

Cross-momentum between stocks based on the returns of their TNIC neighbors generates alphas of as much as 1.55% per month from 1997-2010. Product market momentum subsumes industry momentum and is much more pervasive, generating significant alphas in all but the largest size quintile. The effect is stronger in small, growth, less followed and less traded stocks, and when computed from TNIC neighbors that are not in the same SIC or NAICS code, consistent with limits to information processing.

"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.

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

Employment

2009 – 2010	Consultant - Compass Lexecon, Eagle Energy, Terra Verte Trading
2005 – 2007	Vice President, Commodity Derivatives, BMO Capital Markets
2002 – 2005	Analyst / Associate, Commodity Derivatives, BMO Capital Markets

Other

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

Hobbies: Skiing, Running, Golf, Scotch