



**University
of Victoria**

Graduate Studies

Notice of the Final Oral Examination
for the Degree of Master of Arts

of

BENJAMIN CANN

BSc (University of Victoria, 2013)

**“Choosing a Data Frequency to Forecast the Quarterly Yen-Dollar
Exchange Rate”**

Department of Economics

Wednesday, September 14, 2016

3:00 P.M.

David Turpin Building

Room A144

Supervisory Committee:

Dr. David Giles, Department of Economics, University of Victoria (Supervisor)

Dr. Judith Clarke, Department of Economics, UVic (Member)

External Examiner:

Dr. Mary Lesperance, Department of Mathematics and Statistics, UVic

Chair of Oral Examination:

Dr. Timothy Iles, Department of Pacific and Asian Studies, UVic

Abstract

Given an overabundance of data resources and mixed frequency data sampling (MIDAS) techniques, researchers, economists, and financial forecasters are faced with making a decision on which sampling frequency is best for their experiment. We use financial data and the MIDAS technique to conduct a computationally intensive number of regressions and forecasts to calculate forecasting performance and model fit measurement summary statistics to reasonably represent forecast behavior of four sampling frequencies. We examine the summary statistics for patterns that may suggest a reasonably clear choice of sampling frequency to choose for our forecast model. Quarterly, monthly, weekly, and daily sampling frequencies are considered and compared. Each regression model contains an autoregressive component and four additional explanatory variables and our forecast models are rolling, one and two-step ahead, forecasts of the quarterly Yen and U.S. Dollar spot exchange rate. Results recommend that a weekly sampling frequency be used for one horizon forecasts while there is no clear recommendation to two horizon forecasts.

Keywords: mixed data sampling, forecasting, model selection criteria, time-series, yen dollar exchange rate.