Forecasting National Bankruptcy Rates

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Contents

Problem Description

According to the Office of the Superintendent of Bankruptcy Canada, "The consumer insolvency rate is defined as the number of consumer insolvencies per thousand residents aged 18 years or above." Bankruptcy rates have gained prevalence and importance sine the 2008 economic downturn since most of the issues arising in that time came from unpaid mortgages and the bundling of sub-prime loans that were unpaid. Being able to accuratlely predict economic indicators is paramount to understand and prepare for many macro- and micro-economic events.

Given that most of the bankrupcty filings are caused by economic downturns, it is no surprise that there is seasonality and trend in the data, and it is also not surprising that the largest bankruptcy rates are seen at the end of 2008 and beginning of 2009.

Methods to Solve Problem

Final Method chosen

Results

Initial Exploration

As we can see in Figure 1 which shows the original time series of monthly bankruptcy rates in Canada from January 1987- December 2010, we see there is a clear upward trend. Moreover, there is some visual evidence of seasonality and increasing variance or volatility in the banruptcy rates.

Technical Appendix

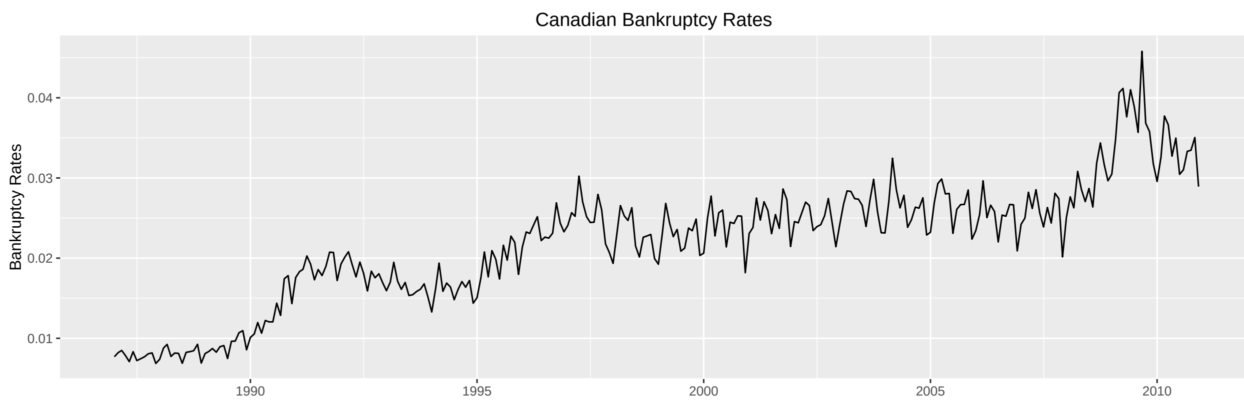

Figure 1: January 2011 – December 2012 bankruptcy rates