AFIR-ERM
Finance, Investment & ERM

Article of the month:

How Does the COVID-19 Outbreak Affect People's Expectation about the Macroeconomy?

King King Li (SSRN)

We conduct an incentivized online experiment to investigate the effect of COVID-19 on people's expectation about the macroeconomy including economic growth rate, inflation rate, house price, and personal consumption, saving, and investment. We elicit subject's risk attitudes, ambiguity attitudes, time preference, and investigate their correlations with expectations about the macroeconomy. We find that ambiguity averse subjects are more likely to hold the belief that COVID-19 will lower the economic growth rate. Expectation on inflation is positively correlated with expected money supply growth. Ambiguity averse subjects are more likely to reduce their consumption and save more due to the COVID-19 outbreak. We document heterogeneity in expectations following the outbreak. We propose a simple model to account for how the outbreak affects expectation of economic growth through the channel of ambiguity aversion. Implications for monetary policy are discussed. Read More

Actuarial Models

Constraints, the identifiability problem and the forecasting of mortality

Iain D. Currie (Annals of Actuarial Science)

Models of mortality often require constraints in order that parameters may be estimated uniquely. It is not difficult to find references in the literature to the "identifiability problem", and papers often give arguments to justify the choice of particular constraint systems designed to deal with this problem. Many of these models are generalised linear models, and it is known that the fitted values (of mortality) in such models are identifiable, i.e., invariant with respect to the choice of constraint systems. We show that for a wide class of forecasting models, namely ARIMA models with a fitted mean and $\delta = 1$ or 2, identifiability extends to the forecast values of mortality; this extended identifiability continues to hold when some model terms are smoothed. The results are illustrated with data on UK males from the Office for National Statistics for the age-period model, the age-period-cohort model, the age-period-cohort-improvements model of the Continuous Mortality Investigation and the Lee–Carter model. Read More

The determinants of lapse rates in the Italian life insurance market

Emilio Barucci, Tommaso Colozza, Daniele Marazzina and Edit Rroji (European Actuarial Journal)

We investigate the drivers of lapses in life insurance contracts of a large Italian insurance company. We consider both traditional (with profit or participating) and unit-linked policies. We develop two different types of analyses. First of all, we investigate the determinants of lapse decisions by policyholders looking at microdata on each contract and some macroeconomic variables. Then, through a panel study, we investigate the role of macroeconomic variables on lapses at the regional level. We observe that policy features affecting lapses of the two types of contracts are quite different. Only for the contracts stipulated few years before, we find weak evidence supporting the Interest Rate Hypothesis, i.e. a positive correlation between interest and

lapse rates. Instead, there is some positive evidence that lapse rates are positively related to personal financial/economic difficulties (emergency fund hypothesis). Read More

Financial Risk

LIBOR Transition to SOFR

Jared Forman (DHG)

LIBOR has been an integral part of the global financial system for decades. Due to its ubiquitous nature, transitioning to alternative reference rates will need careful consideration to limit adverse impacts to the global economy. Regulators, industry working groups and market participants are invested in a synchronized and timely execution of this mandate. Impacts will be felt at all levels of financial institutions, and senior leaders will need to act in these organizations to ensure that effective working groups are assembled to tackle the issues at hand. A call to action has been made, and urgency is needed to accelerate the timeline surrounding LIBOR transformation in preparation for the decommissioning of LIBOR at the end of 2021. Read More

Model Risk in Credit Risk

Roberto Fontana, Elisa Luciano, and Patrizia Semeraro (SSRN)

The issue of model risk in default modeling has been known since inception of the Academic literature in the field. However, a rigorous treatment requires a description of all the possible models, and a measure of the distance between a single model and the alternatives, consistent with the applications. This is the purpose of the current paper. We first analytically describe all possible joint models for default, in the class of finite sequences of exchangeable Bernoulli random variables. We then measure how the model risk of choosing or calibrating one of them affects the portfolio loss from default, using two popular and economically sensible metrics, Value-at-Risk (VaR) and Expected Shortfall (ES). Read More

Investments

Auditing the Fair Values of Investment Securities: An Archival Examination of Auditor Response to Risk Cues

Chris E. Hogan, Sarah E. Stein, and Sarah Stuber (SSRN)

PCAOB inspections and recent field research highlight difficulties faced by auditors when testing fair value estimates. Consistent with these concerns, we find that more than one-third of the fair value estimates in our unique security-level dataset differ from the consensus fair value by greater than five percent, which is an amount large enough to warrant further auditor consideration ("audit difference"). One of the strategies to reduce bias and improve audit quality for fair value estimates is to incorporate informational cues into auditors' risk assessment and substantive testing. If certain types of auditors do (do not) effectively respond to cues suggesting heightened misstatement risk, then we expect to find a negative (positive) association between the ex ante observable cues and fair value audit differences. Our findings reveal that non-expert auditors often miss these ex ante cues; however, expert auditors are able to at least partially incorporate these cues to reduce fair value errors. Specifically, experts appear to respond to cues that require less integrative complexity (i.e., misclassifying the level of the security and internal pricing of the security), but still struggle with cues requiring more integrative complexity such that connections must be drawn year-over-year or across different accounts (i.e., prior year inflation in the investment portfolio and bias in another significant estimate). This collective evidence enhances our understanding of variation in auditors' performance in this difficult area and also highlights where auditors still have room for improvement. Read More

Trending topics
The ACA@10

Joan C. BarreTt and Kurt Wrobel (The Actuary Magazine)

March 23, 2010, the day the Affordable Care Act (ACA) was signed into law, was a day of great promise for everyone without health insurance—it promised access to affordable health care. Ten years later, the question is: Was that promise kept? Certainly, it is an achievement there are now 20 million more people insured than there were in 2010. Yet, there are still 30 million Americans1 who are uninsured, and many more who are struggling with paying premiums and the cost-share on their existing coverage. As the 2020 U.S. election draws near, we need to be able to understand the ACA's real-world application more fully, as the electorate decides where we want to go from here. Should we "repair" or "replace" the ACA? Read More

Covid-19 frazzles AI fraud systems

Steve Marlin (Risk.net)

Seismic changes in customer behaviour see machine learning solutions throw out false positives Banks are reporting a sharp rise in cases of internal and external fraud perpetrated during the coronavirus pandemic – and with typical patterns of behaviour among retail and corporate clients turned on their respective heads, detection systems that rely on past patterns of behaviour to make predictions are struggling to cope. Read More
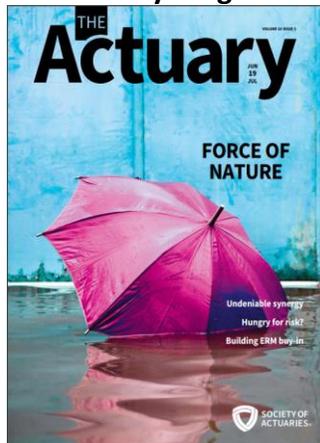
British actuaries help GP surgeries remain open during Covid-19 crisis
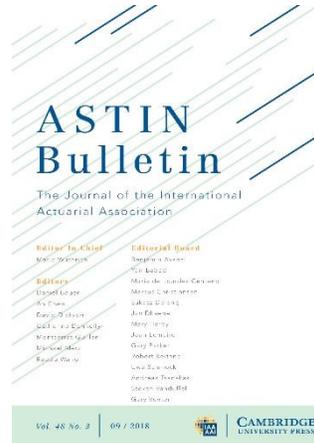
Christopher Cundy (Insurance ERM)

A group of consulting actuaries working in the UK life insurance sector have helped a network of GP surgeries to remain open during the Covid-19 pandemic, by modelling the risk of staff contracting the virus. Read More
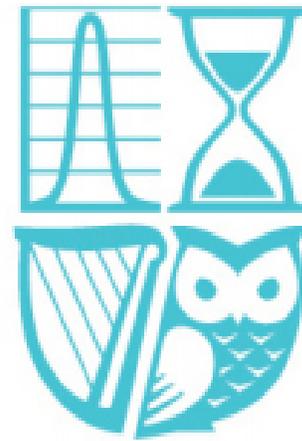
Resources (click upon image to access)

The Actuary Magazine: **ASTIN Bulletin:**   **Irish SoA Database:**

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