The Multivariate Time Series Modelling and Forecasting Workshop was held in Melbourne, Australia on the 18th and 19th February, 2013. More than 80 participants attended this two-day workshop which was hosted by the Department of Econometrics and Business Statistics, Monash University and organised by George Athanasopoulos and Farshid Vahid. George and Farshid acknowledge the Monash Research Accelerator Program at Monash University for the complete funding of the workshop.

George opened the proceedings by thanking all participants and in particular the presenters who had travelled from overseas. Professor Helmut Lütkepohl from DIW Berlin and Freie Universität Berlin delivered the opening keynote address on “Comparison of Methods for Constructing Joint Confidence Bands for Impulse Response Functions”. This paper begins by reviewing a range of methods that are used to construct confidence intervals of the impulse response function in VAR analysis, then proposes a new variant for constructing joint confidence bands at all horizons. The proposed method is an adjusted version of the traditional Bonferroni method. The latter is generally conservative, because it increases the size of the bands to account for the stochastic dependence in the estimated impulse responses. The paper proposes an adjustment which narrows the bands, but still retains the correct asymptotic coverage. Monte Carlo simulation suggests that the adjusted Bonferroni method performs very well in terms of both the coverage level and the width of the band. The neighbouring path band proposed by Staszewska (2007) is a close competitor, but it lacks a theoretical basis. This paper therefore recommends the adjusted Bonferroni method for applied works.

Following on from the theme of the morning keynote address, the first session consisted of four papers on macroeconomic modelling. First, Sandra Eickmeier from Deutsche Bundesbank presented “Time Variation in Macro-Financial Linkages”. This paper constructs a Bayesian VAR model with time-varying parameters, including U.S. GDP growth, inflation, and a few key financial indicators. The model is used to assess the contribution of financial shocks to GDP growth in the U.S., and to analyse possible changes in the volatility of financial shocks and their impact on GDP growth. It concludes that the contribution of financial shocks to the forecast error variance of GDP growth has changed considerably over time (being higher during the global financial crisis period), and that shocks from the housing sector have become more important to the real economy since the early 2000s.

10th IIF Workshop on Multivariate Time Series Modelling and Forecasting: A Summary

Crystal Ball - Call to Action

It is time to put our forecasting expertise to the test! We invite submissions for ‘The Crystal Ball’, a new, regular feature of The Oracle. Inspired by The Economist’s Cassandra blog, we shall print our readers’ predictions for the year ahead. We will look back on the best and worst of the predictions at regular intervals.

We are looking for original, adventurous and humorous predictions on any topic – from international relations, politics, markets and economics through to weather, sports or any other subject. Although meant to be light-hearted, include links to your current research. We hope the column can be a showcase for the diverse range of forecasting subjects and methods that our readers are interested in. Furthermore, we welcome pieces contributing to public debates about forecasting, such as the recent discussion of Nate Silver’s election forecasts or climate change models.

Submissions should be informal in tone and succinct at around 500 words in length. Please send any submissions to Jennifer.castle@magd.ox.ac.uk
News from the IIF Office

IIF online - Blog with us!
Our newly launched website at http://forecasters.org in addition to being more usable, mobile accessible and secure, also has a blog! This blog, depends on the content we publish, so we encourage all of you to share relevant news with us! Whether it is announcements of, or reports from interesting conferences related to forecasting, interesting new papers, or forecasting in the news – anything that would be of interest to your fellow forecasters is fair game!

⇒ Interested in submitting a member profile for the next Oracle (see pg. 4)? Not only will it be printed in The Oracle, but will also be posted on forecasters.org. If interested, please contact me.
⇒ IIF - Social Media We’ve gone social! Join us on Facebook, Twitter and LinkedIn.

Membership Renewals - Feel free to contact me to check your membership status. Or, to renew your membership, visit http://www.forecasters.org/join.

ISF 2013: Forecasting with Big Data, Seoul, Korea, June 23-26
Visit the ISF 2013 website for all of the latest news, deadline dates and registration information.
Both Jennifer and I welcome and encourage your feedback and suggestions about The Oracle including submissions and ideas for improvement.

Pam Stroud, IIF Business Director
forecasters@forecasters.org

Calendar of Events 2013

3-5 June Prediction, Modeling and Analysis of Complex System Dynamics, Ostrava, Czech Republic
5-7 June Workshop on Industry & Practices for Forecasting (WIPFOR), Paris, France
23-26 June ISF 2013, Seoul, Korea
25-28 June Applied Stochastic Models and Data Analysis International Conference (ASMDA 2013), Barcelona, Spain
22-25 July 2013 International Conference on Data Mining, Las Vegas, USA
17-19 Sept Business Analytics Strategy Summit (BASS), Orlando, USA
To submit an item for the Calendar of Events, contact forecasters@forecasters.org

INFORMS Analytics Certification

INFORMS is pleased to announce the provision of the industry’s first analytics certification exam. Applications are now live. You will want to be among the first to have CAP™ after your name and separate yourself from the crowd. IIF members qualify for the INFORMS member rate for the exam -- $495. Non-members pay $695. Learn all about analytics certification provided by INFORMS on our Certification website. Review the Candidate Handbook and Frequently Asked Questions. Still not sure? Contact INFORMS for more information.

Host a Master Student Project in Forecasting May – Sep 2013

Need support in a forecasting project? Develop new forecasting algorithms? Setup a forecasting software system? Audit your current forecasting models or processes?

The Lancaster Centre for Forecasting is offering a range of effective Master student projects in forecasting for logistics & supply chain management, government services, call centres, utilities ... and you can determine the topics!

These projects offer a cost efficient way to carry out work for which a company cannot find the internal analytical resources, to buy in external know-how for a project, or to recruit new team members.

All of our Students are well qualified, and trained in forecasting and analytics. They pursue a degree in Management Science, MSc in Logistics & Supply Chain Management or MSc in Marketing Analytics at the esteemed Lancaster University Management School, a triple-accredited, world-ranked management school, consistently ranked among the UK’s top.

Contact us today at projects@forecasting-centre.com to develop a master student project with us!
More information can be found at: http://www.lums.lancs.ac.uk/research/centres/Forecasting/master-student-projects-2013/
The Lancaster Centre for Forecasting
A Letter from the IIF President, Mohsen Hamoudia

Following the successful 2012 achievements for our Institute, I am delighted to update you about upcoming events and share with you some good news.

ISF2013 is now underway. The Organizing Committee, led by Duk Bin Jun from KAIST Business School of Seoul, is working on producing a successful conference and one, which will allow for ease of participation for our members. Information about logistics (accommodation, transportation, etc.) is available on our website (http://forecasters.org/isf). I hope you will be attending the 33rd International Symposium on Forecasting which will be held in Seoul, Korea on 23-26 June 2013. Personally, I am aware about the financial effort required for such a conference location for members who are located in Europe, the Americas and in Africa. The IIF is an international organization and this is the second time that we are organizing our annual conference in Asia. So, I invite you to submit your abstract by 16 March 2013 on http://forecasters.org/isf and you will receive the notification of acceptance or rejection no later than 31 March 2013. I also invite you to organize a session related to any topic on Forecasting. People who are interested in organizing an Invited Session should send their proposals to the Program Chair, Robert Fildes r.fildes@lancaster.ac.uk

• SAS has recently agreed to renew our agreement to continue the SAS/IIF grant award for an additional five years, beginning with the next award, 2013/2014. I’d like to give special thanks to Mark Little at SAS, who has been extremely helpful in all things related to the grant program, in particular getting the contract through his management team in a timely manner. And, of course, continued thank you to our Award Review Committee.

• The IIF has signed in January a Certification Program with Demand Driven Information Technology located in Shanghai, China. Fudan University will support this program. We are exploring the possibility of involving other universities such Shanghai University and Shanghai Institute of Foreign Trade. The first session should commence in early May. For further information, please contact Laurent Ferrara (lferrara@u-paris10.fr) and Dilek Onkal (dilekon@gmail.com).

• The location and the date of ISF2015 has been agreed by the IIF Board; our annual conference will be held on June 21-24, 2015 at the Convention Center of Riverside (CA). The General Chair, Gloria Gonzalez-Rivera, is working hard on the preliminary logistical issues. More information will be posted later on our website.

• The IIF, in partnership with the Fisher College of Business of Ohio State University, will hold the 2013 Practitioner Conference on September 25-26 on the campus of OSU. The conference title will be “S&OP and Collaborative Forecasting” and feature invited presentations from practitioners and academics on the planning and collaborative processes. OSU will host the conference and take all responsibility for registration and hotel arrangements. The Blackwell hotel is located on campus and will be the primary source of lodging. The IIF will develop the program and publicity for it. I would like to warmly thank LenTashman for this initiative hoping it will reinforce the collaboration between academics and practitioners.

• The IIF, in partnership with the London School of Economics (LSE) in London will be organizing a workshop in November 2013 in London about “Forecasting in Information Communication Technology in the digital Era”. More information about speakers and logistic are coming soon. IIF Members who are interested in speaking and attending this conference are invited to contact me (mohsen.hamoudia@orange.com)

All these points and other ones will be discussed in our members’ meeting at ISF2013 in Seoul where your questions and worries will be addressed and your suggestions taken to the board table.

Multilingual Dictionary of Forecasting, by Petr Dostál and Zdeněk Brož
This dictionary focuses on the forecasting terminology. It helps to bring the community closer together and to unify the forecasting terminology in various languages. Thirty world languages are covered in this unique dictionary. Each language was edited by one or more reviewers. Reviewers are forecasting experts.

This dictionary includes more than two hundred of the most important terms in the various subject matter areas of forecasting. Entries are arranged alphabetically in English. Each page contains an English keyword, definition in English and translations. Each keyword and definition should be clear even to readers who are not familiar with forecasting or statistics.

The editors are P. Geoffrey Allen (University of Massachusetts, USA), Mohsen Hamoudia (ESDES Business School, France) and Abdel-Badeeh Salem (Ain Shams University, Egypt).

Why Did You Become a Forecaster? George Athanasopoulos

In the last semester of my Bachelor of Commerce (Honours) at Monash University, I received an offer of employment with one of the major banks in Australia (the ANZ bank). At the time, I was getting ready to work in a large corporation. However, at the completion of the semester, the then head of department Professor Maxwell L. King approached me and my good friend and classmate Ashton de Silva (also an academic, now at RMIT University, Melbourne, Australia) and asked us to continue our studies by enrolling in the Master of Philosophy degree in Econometrics, as well as offering us a fractional teaching contract. This was a very sudden and unforeseen turn of events. It was completely “unforecastable”, but also very exciting. I had always wanted to become an educator, and this was the aspect of the proposition that really attracted me at first. I decided that I was going to continue, and called the bank to turn down their offer.

After completing the compulsory coursework in the Master’s degree, my next task was a research project. Inspired and guided by Professor Farshid Vahid (who subsequently became my PhD supervisor), I wrote a paper on Australian income inequality, which was published in the Economic Record. Seeing my work published in an academic journal was a thrill. I was offered a PhD scholarship, and expected to write my PhD dissertation on something related to income inequality, welfare, poverty.

Then, in 2003, the late Professor Sir Clive W. J. Granger visited Monash. It was his suggestion that prompted a change of direction to pursue the path of forecasting. My new topic of interest became multivariate ARIMA modeling, with a particular focus on forecasting. In my thesis, entitled “Essays on alternative methods of identification and estimation of Vector Autoregressive Moving Average Models”, I developed a methodology for identifying and estimating VARMA models. My 2008 publication in the Journal of Business and Economics Statistics, entitled “VARMA versus VAR for macroeconomic forecasting”, was the first in the literature to perform such a multivariate forecasting competition and to provide evidence that the models identified by the VARMA methodology proposed in my thesis forecast more accurately than the ubiquitous but theoretically unattractive VARS.

In 2006, I started a post-doctoral position with Professor Rob J. Hyndman. The topic of research was “tourism forecasting”. The aim was to build forecasting models with a focus on forecasting various aspects of Australian tourism. My research started to have an impact on industry, which made it very exciting. I started building forecasting models that for the first time were used by industry and had a direct impact on policy making at Tourism Australia. The first paper written based on this research (with Rob) reviewed the forecasts generated for Australian domestic tourism by the Tourism Forecasting Committee (an independent body responsible for generating consensus forecasts for Australian tourism) and published by Tourism Research Australia (the body responsible for providing research support to Tourism Australia and publishing Australian tourism forecasts). Our paper forecasted a decline in domestic tourism, in contrast to TRA’s published forecasts. We suggested that the published forecasts, especially the long-term forecasts, might be over-optimistic. These results triggered TRA to reconsider its forecasting practices and to revise their future forecasts downward.

In our second publication (with Rob and Roman Ahmed, our PhD student), we looked at forecasting methods for forecasting hierarchical times series. This paper proposed two new methods for forecasting time series data that belong to a hierarchical structure. The paper applied these methods to the forecasting of Australian domestic tourism demand disaggregated by geographical regions and by purpose of travel. It showed that the proposed methods produce more accurate forecasts than the typical bottom-up and top-down approaches. These methods were adopted fully by TRA for producing detailed regional forecasts for Australian domestic tourism flows.

I think that the feeling of excitement and satisfaction that you get from overcoming demanding research challenges, which I first experienced during my post-graduate studies, and then discovering the impact of my post-doctoral research on industry, is what attracted me to become a forecaster and has driven me to continue working on various aspects in the stimulating and ever changing field of forecasting. Besides my ongoing research project, I am currently writing (with Rob) a forecasting textbook entitled “Forecasting: principles and practice”. The entire book is online and free-of-charge at http://otexts.com/fpp. A print version and a downloadable e-version will be available soon to purchase on Amazon. We are writing the book for three audiences: (1) people who find themselves doing forecasting in business when they may not have had any formal training in the area; (2) undergraduate students studying business; (3) MBA students doing a forecasting elective. We use it ourselves for a second-year subject for students who are undertaking a Bachelor of Commerce degree at Monash University, Australia. Improving industry practices and seeing students flourish and pick up on cutting edge forecasting technology is very fulfilling.

Finally, being part of a large international forecasting community which thrives on innovation is also very stimulating. I look forward to the International Symposium on Forecasting every year. I have attended almost every meeting since my first one in 2004, which was in Sydney, Australia. In February, I organized (with Farshid) a two-day workshop on “Forecasting Multivariate Time Series” which was funded by research funds from Monash University and also supported by the IIF. The response was overwhelming. We had a two-day program filled with presentations from researchers from across the world, featuring their current research on issues and challenges related to multivariate modeling and forecasting. We are looking forward to the special issue of the International Journal of Forecasting with the same title, which will include some papers from this workshop (the end date for submissions to the special issue is June 30, 2013).

I hope to keep working in this field for a long time to come.
The Journal of The Finnish Economic Society has awarded Lars-Erik Öller and Pär Stockhammar a prize for best article 2011. Parts of the article have been presented at ISFs and the whole project will be reported at the ISF in Seoul this year. The authors studied the macroeconomic feedback chain invention – stock exchange – production. The authors share the prize money of € 4000 (US $ 5350), which will help to pay the expenses for visiting ISF 2013.

George Washington Research Program on Forecasting In Honor of Professor Herman O. Stekler

“Stekler is the greatest... professor there ever was. But prepare to be worked... hard.” – a former student

The Research Program on Forecasting, part of the Center for Economic Research in the Department of Economics at The George Washington University, is proud to announce an initiative to rename itself The H.O. Stekler Research Program on Forecasting.

About Professor Stekler: Herman Stekler has explored and evaluated the value of economic forecasts for over fifty years and has published over 100 articles. During his 19 years and counting at GW, Herman has provided inspiration to a new generation of researchers through his teaching, articles, mentoring, and co-authorship. To date he has published 19 articles with GW students. Herman's lifelong love of learning has forever influenced those around him.

About the Research Program on Forecasting: The program supports research, teaching, and dissertation supervision in forecasting. Current research interests of program members include a wide range of studies on the methodology of forecasting and forecast evaluation, as well as preparation of macroeconomic and microeconomic forecasts. The research program, through its partnership with the Federal Forecasters Consortium, helps connect students with over 400 professional forecasters in Washington, DC, and beyond.

About the Fundraising Initiative: We are raising current use funds to support the forecasting program. When we reach our target of $100,000, the fund will be converted into an endowed fund to support the program in perpetuity.

Funds raised will support students interested in research on forecasting, providing for:
- Awards for students to work with professors or on their own on projects related to forecasting.
- The purchase of datasets and software for students to use for forecasting-related research.
- Support for students to submit research related to forecasting to conferences and journals.

To make a tax-deductible donation, please:
1. Visit http://www.gwu.edu/give and select Columbian College of Arts and Sciences under the Purpose of Gift section and then write “For the Economics Department, Research Program on Forecasting” under the Comments/Instructions section.
2. Write a check to The George Washington University, with “Stekler Research Program on Forecasting” written in the Memo line, and mail to:
Stekler Research Program on Forecasting c/o Tara M. Sinclair Department of Economics The George Washington University 2115 G Street NW #340 Washington, DC 20052

Herman Stekler addresses the GW-IMF Forecasting Forum held in honor of his 80th birthday. (November, 2012)

Conference on Prediction, Modelling and Analysis of Complex System Dynamics held in Ostrava, Czech Republic June 3 – June 5, 2013. For more information:
The next paper, “Shifting Preferences at the Fed: Evidence from Rolling Dynamic Multipliers and Impulse Response Analysis”, was presented by Matthew Greenwood-Nimmo, from The University of Melbourne. This paper develops a new method of modeling the Taylor rule in a system setting, which accounts for the mixture of I(0) and I(1) variables explicitly. When estimated using U.S. data, the model provides modest support for an inertial Taylor rule; however, inflation and the output preferences of the Fed vary significantly over time. More importantly, they find that the Taylor Principle was upheld robustly under Volcker (1979Q4:1987Q3), often upheld pre-Volcker, but rarely observed post-Volcker.

Lance Fisher from Macquarie University presented the third paper in this session: “Some Pitfalls in Modelling with a Mixture of I(1) and I(0) Variables”. This paper shows that the presence of I(0) variables gives rise to identification restrictions of structural shocks, which have been often neglected in practice. A failure to impose these restrictions can lead to the false labelling of structural shocks as transitory, when in fact these shocks have long-run effects. The paper also shows that, in the mixed variable case, the sign restrictions associated with I(0) variables should be applied carefully.

The last paper in this session was presented by Jing Tian from the University of Tasmania, and was titled “On Trend-Cycle Decomposition and Data Revision”. This paper is motivated by the well-documented finding of a large negative correlation between trend and cycle innovations. It discusses the economic implications of this finding, including the filtering and smoothing properties, and attempts to identify the direction of causality between these two innovations empirically. The results suggest that the filtered cycles under two different specifications of causal direction are very similar. Hence, more information is needed in order to identify the causal direction.

The afternoon session focused on copula and financial modelling and forecasting. Valentyn Panchenko from the University of New South Wales presented “Comparing the Accuracy of Copula-Based Multivariate Density Forecasts in Selected Regions of Support”. This paper develops a testing framework which is set in the context of the Kullback-Leibler Information Criterion, and uses the out-of-sample conditional likelihood and censored likelihood to restrict the evaluation to the region of interest. Monte Carlo simulations show that the resulting test statistics have satisfactory size and power properties in small samples.

The second paper in this session, entitled “Copula Modelling of Dependence in Multivariate Time Series”, was presented by Michael Smith from The University of Melbourne. This paper proposes a copula model which accounts for nonlinear serial and cross-sectional dependence directly. A D-vine is used for the joint distribution of the multivariate time series. The conditions for stationarity are derived, and a parallel algorithm for computing the likelihood is given. Two empirical examples are then used to illustrate the importance and flexibility of this approach.

Harald Scheule from the University of Technology, Sydney, presented “Dynamic Implied Correlation Modelling and Forecasting in Structured Finance”, the last paper of this session. This paper suggests a dynamic panel regression for modelling and forecasting implied correlations. Random effects are introduced in order to account for unobservable time-specific effects on implied correlations. The empirical findings support the proposed dynamic mixed-effects regression correlation model even during the global financial crisis.

The last presentation for the first day was a keynote address by Professor Massimiliano Marcellino from European University Institute, Bocconi University and CEPR, on the topic of “Markov-Switching Mixed Frequency VAR Models”. This paper introduces and discusses estimation and inference for Markov-switching mixed frequency VAR models. Two alternative formulations of the model are examined: one in state-space form, and the other through a stacked vector system. The two formulations are applied to the prediction of GDP growth and business cycle turning points in the euro area. The results suggest that these models are useful for estimating the status of the economy in particular.

In the evening of this first day, all of the presenters and chairpersons enjoyed a workshop dinner while viewing a glorious Melbourne sunset at “Sails on the Bay”, a restaurant which is situated on the edge of the beach and provides a panoramic view of the bay.

The second day of the workshop started with a keynote address on “Macroeconomic Modelling and Time Series Analysis: A Personal Polemic”, delivered by Professor Don Poskitt from Monash University. This paper investigates a common practice in the DSGE modelling literature of using finite lag VAR models to approximate the true VARMA data generating process. It examines the theoretical behaviour of the finite VAR models, and shows that the overall error of the finite VAR approximation can be decomposed into two basic components: the estimation error, which stems from the difference between the parameter estimates and their population ensemble counterparts, and the approximation error, which comes from the difference between the theoretical minimum mean squared error VAR(n) model and the true VAR(∞) process. Results based on a real business cycle model and a practical example suggest that the approximation error approaches its asymptotic value at a slower rate than does the estimation error. Using the sorts of sample sizes and lag lengths which are commonly employed in practice, the paper shows that finite VAR(n) models are likely to exhibit substantial errors of both types. It then proposes a new method for identifying the structure of VARMA models in terms of a scalar ARMAX representation.

The next session included three papers on empirical forecasting. First, Anvesh Vasnev from The University of Sydney presented a paper on “Practical Use of Sensitivity in Econometrics with an Illustration for Forecast Combinations”. This paper first introduces the difference between absolute and relative sensitivities, and highlights the context-dependent nature of sensitivity analyses. The idea of relative sensitivity is then applied to combining forecasts, and sensitivity based weights are introduced. All of the concepts are illustrated using the European yield curve example. The results show
Dealing with Forecast Inaccuracy, by Bob Stahl

“If only we had an accurate forecast?”

Yes indeed – a highly accurate forecast would make things a whole lot better. The only problem is the “IF.” Let’s not hold our breath waiting . . .

It seems as though people have been trying forever to develop predictive models that generate accurate forecasts. While progress has been made, getting a highly accurate forecast remains an elusive goal. Dr. David Orrell, an Oxford scholar who has spent his career developing predictive models, said, “Techniques such as agent-based modelling, nonlinear dynamics or network theory can be used to simulate systems, visualize data and detect weaknesses or suggest improvements [but] . . . the aim is less to predict the future, than [to] prepare for it.”

What Orrell is getting at is that variability in forecasting will always exist and that companies need to learn how to deal with that reality. How to do that is the question.
Open Workshop: Forecasting with Collaborative Information
April 23, 2013 | 13:00-17:00
Work Foundation, London

Join us for a half-day workshop on collaborative planning and forecasting – free of charge!
Collaboration in supply chains is a hot topic for both manufacturers and retailers. However the implications for forecasters have yet to be understood. Even with statistical forecasting and S&OP in place, demand planners face new challenges as they attempt to integrate large quantities of heterogeneous data, including monthly sell-in and sell-out data, weekly inventory levels and daily ePOS data, into forecasting. This workshop addresses some of these key challenges!

Learn from 3 industry talks by Lego, Rolls-Royce, and the Forecasting Centre who share their experiences on implementing collaborative planning and forecasting. The seminar will conclude with a panel discussion, allowing delegates to contribute to the debate and pose questions to the panel.

Collaborative Forecasting at the LEGO® group: Challenges in a rapidly growing Business
Daniel Barrett, LEGO, Senior Manager for Forecasting Methodology

Collaboration due to Complexity
Judy Nolan, Rolls Royce, Forecasting Improvements Manager

Forecasting with(out) Collaborative Information? The gap between Theory and Practice
Sven F. Crone & Matt Weller, Director / PhD student, Lancaster Centre for Forecasting

Panel Discussion: Making Collaboration work for Forecasting
Daniel Barrett, Judy Nolan, Sven F. Crone

Don’t miss this unique opportunity to meet & network with industry experts!
Register your intention of participation now!
The workshop will be held on April 23 (1pm-5pm) at the Work Foundation
Read more about our forthcoming workshops, and register for the workshop: http://www.lums.lancs.ac.uk/events/forecasting/27752/

About us
Lancaster Centre for Forecasting (LCF, www.forecasting-centre.com) leads the field in applied forecasting research in Europe, offering over 20 years of forecasting expertise in consultancy and training. Read more: http://www.lums.lancs.ac.uk/research/centres/Forecasting/History/

Fellow Forecasters! We have the pleasure of co-chairing the “Forecasting” stream of special sessions to be held at EURO 2013 conference, to be held on 1-4 July 2013, in Rome, Italy, http://euro2013.org
EURO will include a general forecasting stream which aims to capture the plethora of methodological approaches and application areas in Forecasting, relevant both from an academic and a practitioner perspective. In addition, it will include a series of coherent special sessions hosted by experts in their respective fields of forecasting:

Telecommunication forecasting Mohsen Hamoudia
Supply Chain Forecasting John Boylan & Zied Babai
Modelling and forecasting in Power Markets Carolina García Martos

Probabilistic Approach to Modelling Macroeconomic Uncertainties Carlos Diaz Vela
Nowcasting and forecasting cyclical movements Gian Luigi Mazzi
Forecasting with Neural Networks & Computational Intelligence Nikolaos Kourentzes
Energy forecasting Juan Trapero Arenas
For more information on the Forecasting Stream of EURO 2013, please visit the dedicated website: http://euro-2013-forecasting-stream.com/
EURO 2013 Forecasting Stream Co-Organisers: Dr. Sven F. Crone, Prof. Robert Fildes, Dr. Fotios Petropoulos, Prof. Antonio J. Rodrigues
Mr. President, we have a climate forecasting problem

**Climate seers as blind guides**

**Forecasts often use unscientific computer models**

The science of forecasting is complex. After 50 years spent studying the issue, I have found there is plenty of experimental evidence that in complex, uncertain situations, experts cannot forecast better than those with little expertise. In 1980, MIT Technology Review published my "Seer-sucker Theory": "No matter how much evidence exists that seers do not exist, suckers will pay for the existence of seers." Since 1980, research has provided more evidence for this surprising theory, especially Philip Tetlock's 2005 book, "Expert Political Judgment."

Forecasts of dangerous man-made global warming rely heavily on expert judgments. Is the global warming alarm movement another example of the seer-sucker phenomenon? If so, what is the scientific approach to climate forecasting?

In the 1990s, I organized an international group of 39 scientists from various disciplines to summarize principles for a scientific approach to forecasting. The principles are based mostly on experimental studies on what works best in given situations. Some, such as the principle of full disclosure, are based on commonly accepted standards. The findings were translated into a list of 139 scientific principles and published in the book "Principles of Forecasting" in 2001. The principles are available at forecastingprinciples.com, and they are revised as new evidence becomes available. This site includes a freeware package that allows anyone to audit forecasting procedures.

In 2007, I along with Kesten Green from the University of South Australia, published an audit of the procedures used by the U.N. Intergovernmental Panel on Climate Change (IPCC) to produce "projections" of global warming. The IPCC authors used computer projections derived from some scientists' expert judgments. They call the projections "scenarios" (i.e., stories). As the authors admit, they are not forecasts, yet they are used as such. The audit showed that when the IPCC procedures are assessed as if they were forecasting procedures, they violated 72 out of 89 relevant scientific forecasting principles.

What does scientific forecasting tell us about global temperatures over the next century?

In 2009, Mr. Green, Willie Soon of the Harvard Smithsonian Center for Astrophysics and I conducted a forecasting validation study using data from 1850 through 2007. We showed that a simple model of no trend in global mean temperatures for horizons of one to 100 years ahead provided forecasts that were substantially more accurate than the IPCC's 0.03 degrees Celsius per year projections. For horizons of 91 to 100 years, the IPCC's warming projection had errors 12 times larger than those from our simple model. Our own forecasting procedures violated only minor evidence-based principles of forecasting, and it did not rely on expert judgment about the trend. Scientific forecasts since that 2009 paper, described in our latest working paper, assess those minor deviations from the principles, and the results support our earlier findings.

Have there been similar cases in the past where leading scientists and politicians have concluded that the environment faces grave perils? In an ongoing study, we have identified 26 alarmist movements that were similar to the current man-made global warming alarm (e.g., population growth and famine in the 1960s, and global cooling in the 1970s). In all cases, human activity was predicted to cause environmental catastrophe and harm to people. Despite strong support from leading scientists, none of the alarmist movements relied on scientific forecasting methods. The government imposed regulations in 23 of the 25 alarms that involved calls for government intervention. None of the alarming forecasts turned out to be correct. Of the 23 cases involving government interventions, none were effective, and 20 caused net harm.

Policy on climate change rests on a three-legged stool of forecasts. First, it is necessary to have valid and reliable scientific forecasts of a strong, persistent trend in temperatures. Second, scientific forecasts need to show that the net effects of the trend in temperatures will be harmful. Third, scientific forecasts need to show that each proposed policy (e.g., a policy that polar bears require special protection because of global warming) would provide a net benefit relative to taking no action. A failure of any leg invalidates policy action.

Since 2007, we have searched for scientific forecasts that would support the three-legged stool of climate policy. We have been unable to find a single scientific forecast for any of the three legs -- the stool currently has no support. Two ways to encourage unity on the climate change issue would be to insist that forecasts be provided for all costs and benefits, and that all forecasting procedures abide by scientific principles. If validated principles are not included in the current forecasts, they should be added. Until we have scientific forecasts, there is no basis for unified action to prevent global warming -- or cooling. Rational climate policies cannot rely on seers, no matter how many of them, how smart they are or how much expertise they possess.

J. Scott Armstrong is a professor at the University of Pennsylvania and author of "Long-Range Forecasting" (Wiley-Interscience, 1985).
SAS News

SAS Company News
SAS is #2 in Fortune’s 2013 ranking of the 100 Best Companies to Work For in the US.

SAS Time Series Studio is a new graphical user interface in SAS Forecast Server 12.1 (released last August), providing interactive time series exploration and analysis. Udo Sglavo has written a blog “Divide and Conquer: Segmenting Time Series for Improved Forecasts” that illustrates the use of TSS. You can get additional information in this recorded Analytics 2012 presentation by Udo and Meredith John, or from these additional videos by Udo (TSS Part 1, TSS Part 2).

Also available since the August release is the new SAS Forecasting for Desktop, aimed at smaller scale automatic forecasting for small and mid sized businesses. Find more details in this whitepaper.

SAS Personnel News

Three new forecasting related whitepapers (by authors in the SAS Global Forecasting Practice) will soon be available for free download:

• “Unlocking the Promise of Demand Sensing and Shaping Through Big Data Analytics,” by Jack Hymanson.
• “Integrating Externally Developed Forecasts into SAS Forecast Server,” by Nitzi Roehl and Geoffrey Burness (of PDF Analytics).

Forecasting Events

Mike Gilliland and Meredith John will be presenting “Process Control Methods in Business Forecasting” at the INFORMS Conference on Business Analytics and Operations Research in San Antonio, TX (April 7-9).

Analytics 2013 in London (June 19-20) features a full day forecasting track that includes Ed Blair of SAS (on Combined Forecasts) and Sven Crone of Lancaster University (on Time Series Data Mining), as well as presentations from RWE npower (on Forecasting Energy Demand) and Escapo and 4C Consulting (on Analytical Forecasting and Optimization). The conference has additional tracks on Introduction to Analytics, Predictive Modeling, Text Analytics, Analytics for Customer Insight, Analytics for Fraud, Analytics for Risk, and Supply Chain Analytics. Watch the Inside Analytics 2013 video series for more information.

CPDF Training Workshops

Where in the world do we find the greatest demand in multi-national companies for Demand Forecaster training? By the way inquiries are coming in to the CPDF website, it appears to be the Middle East followed closely by South Africa. In 2012, the CPDF three-course training curriculum, designed for corporate analysts, planners and managers, was conducted in six countries with the certification designations earned as a post-workshop, self-paced e-learning exam. After successful completion of all three certification designations, participants are qualified to receive the IIF Certificate of Forecasting.

The pace of the training workshop offerings will increase in 2013 starting with an onsite workshop for ESKOM (Energy sector in South Africa) and three additional public workshops in Johannesburg, RSA in April. In May, it is the Middle East again with seven public workshops in Istanbul, Turkey and Jeddah, KSA. A complete schedule with venues and registration details is maintained on www.cpdftraining.org.

In October 2013, SmartAge Consulting, Ltd of Ankara, Turkey will be hosting a CPDF (Level I) and CPDF (Level II) Workshop in Dubai, UAE. You can get more information by visiting http://www.smartage.com.tr/trainingcpdf.php.

Starting with two onsite training workshops in March 2012 for a couple of dozen demand forecasters/planners/managers (pictured below) at the State Trading Organization (CGP, Energy sector) in the Maldives, I have been able to conduct additional onsite workshops for Baxter Healthcare in Sydney, Australia and the Zahid Group (Heavy Construction) in Jeddah, KSA.

While the training content for demand forecasting is relatively generic across industry, the onsite workshops require customization to create a better match (using company data) to the particular operational ‘best practices’ for the organization. Over time, this type of workshop may give rise to some interesting research opportunities for case histories and audit studies involving standard practices across multiple industries. Anyone interested in getting data in this area for research should get in touch with Hans Levenbach at hans@delphus.com or visit www.cpdftraining.org/curriculum.htm for curriculum details.

The Level III Training Workshop is conducted entirely in the cloud in a format in which teams of three participants collaborate in developing rolling (unit) forecasts for three product lines in a large database (10,000 demand records) for a simulated budget cycle of 12 periods. The forecasting cycle is repeated four times (‘quarterly’) and each team submits a forecast at scheduled times during the two-day workshop. As each forecast is submitted, the team’s database (populated with real company data) is updated with actuals from the preceding quarter. Practitioners use a forecast decision support system in the cloud (through Remote Desktop) that has tools for creating objective, unbiased baseline forecasts along with management overrides to forecasts while maintaining an audit trail of all changes made to the database. The resulting Access databases can become a fruitful resource for studying the role of subjective forecast overrides in a controlled simulation of a monthly baseline forecasting cycle in which the practitioner teams work under identical work constraints with the same real data, software and forecast preparation time. The workshop has been conducted in China, South Africa, Turkey and Australia and will be offered multiple times in 2013. Anyone interested in the topic for research or analysis should get in touch with Hans (hans@delphus.com).
Dealing with Forecast Inaccuracy, contd.

Executive S&OP has contributed to solving this problem in a number of ways:

- First, it has created a “new approach” to sales forecasting that expresses the forecast in broad market-facing families that are tied to extrinsic leading indicators, versus lots of inaccurate detailed forecasts.
- Second, it looks at the future through several prisms and reconciles the differences to a single company-wide forecast, creating greater credibility and confidence.
- Third, through the effective use of simplifying data assumptions about mix, it has enabled the forecast to be tied to the resource side of the business.
- And last, but not least, this simplified approach has allowed rapid and meaningful simulation, testing the risk and consequence of the inherent variability limits that will always exist.

The CEO of a major corporation, who has been successfully using Executive S&OP for some time, put it this way, “. . . before Executive S&OP, things were ad hoc and inconsistent. After implementation . . . there is a regular cycle of meetings where we agree on what the demand picture is, understand the potential variability, and determine how we are going to supply it. We no longer make disconnected individual decisions, but rather make decisions collectively, fully knowing the impact, risk, and consequence of the alternatives choices.”

Managing a business has never been more difficult than today due largely to the increasing levels of uncertainty. Fortunately, we now have the tools to better deal with that uncertainty and variability. We see more and more companies capitalizing on the effective use of Executive S&OP tools. We hope you are one of the fortunate and, if not, that you become one soon. Within six months, you can have the basics of a first-rate Executive S&OP process in place.

And remember what Dr. Orrell, the Oxford guy, said: “. . . the aim is less to predict the future, than [to] prepare for it.”

Bob Stahl

Summit LLC News

Summit Wins Opportunity with U.S. Mint

Summit is pleased to announce that it has been contracted by the U.S. Department of the Treasury to provide the U.S. Mint with economic support services focused on forecasting to inform critical Mint operational and strategic decision-making. The Mint is charged with manufacturing and distributing circulating, precious metal, and collectible coins and national medals while avoiding costs to the U.S. taxpayer. Among its anticipated tasks, Summit will develop multiple forecasting models for the Mint to predict future costs of production, demand for circulating coinage, and demand for investment and collectible products. Summit’s engagement is also anticipated to involve elasticity studies, risk assessments, and trending analyses of economic factors affecting Mint operations. Learn more about Summit’s engagements and capabilities by visiting our website at www.summitllc.us.

Summit Wins Opportunity with Federal Reserve Bank of St. Louis/Treasury Office of Fiscal Projections

Summit has been awarded its first option year in an engagement with the U.S. Treasury’s Office of Fiscal Projection (OFP). Summit began supporting OFP in 2010, and during the upcoming option year, our team will complete the long-term fiscal forecasting model suite that has been developed in four phases. Summit was retained by the Treasury’s OFP to produce long-term fiscal forecasts for the Federal government in order to determine the Treasury’s cash and financing needs. In particular, Summit developed a suite of sophisticated econometric models that make use of the President’s Adjusted Baseline and CBO Cost Estimates to produce accurate forecasts in a dynamic economic and policy environment. Summit will also complete model documentation and produce monthly fiscal reports to provide Treasury with periodic information to guide strategic and policy decision-making. Learn more about Summit’s engagements and capabilities by visiting our website at www.summitllc.us.

Summit - Career Opportunities

Summit is a boutique analytics advisory firm that guides Federal agencies, financial institutions, and litigators as they decode their most complex analytical challenges. We are currently expanding our forecasting practice and seek new team members who have strong forecasting skills. Candidates will play a vital role on a variety of analyses in support of public policy decision-making.

Candidates can expect to work on new firm engagements with Federal agencies, including the Treasury’s Mint and Office of Fiscal Projections. These engagements require thorough knowledge and experience in trend analysis and time series forecasting.

For more information about this position, visit the IIF site, http://forecasters.org/blog/category/jobs/

To apply, please send your resume and cover letter to HR@summitllc.us. Summit Consulting, LLC, www.summitllc.us
IIF Announcements

33rd International Symposium on Forecasting
Seoul, Korea | 23-26 June 2013
Call for Papers - Final few days!

The Program Committee invites the submission of abstracts related to the theory and practice of forecasting. For more information on ISF 2013 and to submit an abstract, visit our website http://forecasters.org/isf/

16 March 2013  Deadline for abstract submission
31 March 2013  Notification of acceptance or rejection of abstracts

The keynote speakers include:
◊ Roy Batchelor, Professor of Banking and Finance, Cass Business School, London, United Kingdom
◊ James D. Hamilton, Professor of Economics, University of California, San Diego, USA
◊ Philip Hans Franses, Professor of Applied Econometrics and Professor of Marketing Research, Erasmus University Rotterdam, Netherlands
◊ Rob Hyndman, Professor of Statistics, Monash University, Australia

International Journal of Forecasting - News

The first two issues of the IJF for 2013 are out. The second issue contains a special section on Forecasting Support Systems edited by Robert Fildes and Paul Goodwin. This is an area of forecasting research that hasn’t had a lot of attention, so I am delighted that Robert and Paul have pulled together a collection of fascinating papers, and I hope it prompts further research on forecasting support systems. Coming up we have a special issue on Flash Indicators and another on Forecasting Business Cycles, both the products of IIF workshops. We also have a special section in preparation on forecasting electricity load and wind power, where the papers describe the top performing methods in a recent Kaggle competition (www.gelcom.org).

I’m pleased to announce that Roy Batchelor will be giving the IJF Editor’s Invited paper at the International Symposium on Forecasting in Seoul. His topic is “Forecasting Financial Markets: Some Light from the Dark Side”. The abstract for his talk is at http://goo.gl/csOjK.

Rob J Hyndman
Editor-in-Chief, International Journal of Forecasting
www.forecasters.org/ijf

The Oracle

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The International Institute of Forecasters (IIF) is the preeminent organization for scholars and practitioners in the field of forecasting. The IIF is dedicated to stimulating the generation, distribution and use of knowledge on forecasting. Membership, including a subscription to this newsletter, is USD145.00 for one year, USD265.00 for two years and USD55.00 for students.

All articles contained herein (except those taken from other sources) can be republished without approval as long as proper credit is given to the IIF.

We welcome letters, opinions, suggestions, articles, etc. from our members. Correspondence and submissions for the next issue of The Oracle should be sent to Jennifer Castle at the above email address. For more information, contact Pam Stroud, IIF Business Director at forecasters@forecasters.org

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