

# Interview with Harald Uhlig\*

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*– Can you tell us a bit about your research interests and some current projects you are working on?*

I am generally interested in the interaction between financial markets and macroeconomics. I also have an interest in Bayesian time series methods. I have several ongoing projects; some are old and some are new. One project, which I am excited about, is thinking about sovereign debt crises and bailouts. It is motivated by the current situation in Europe. It's a joint work with *Francisco Roch*, who is now working at the IMF, after having been my PhD student at the University of Chicago. We are combining existing debt crisis models, as developed by *Cole and Kehoe*<sup>1</sup> as well as *Arellano*<sup>2</sup>, and asking whether there is a potential role for bailouts, and what they will imply. There are many questions one could ask, obviously. We focused on a particular one: could a debt purchase guarantee as perhaps envisioned by the ECB lead to the selection of a good equilibrium among several, and how should it go about it? In the model, there is a possibility of a buyer's strike. Then, since there is a possibility that for a co-ordination failure in the future, where buyers just refuse to buy the debt of a country, current buyers will take that into account, and that can lead to yields being very high compared to a situation without the possibility of such a buyer's strike. This feature of the model captures the view by some, that evil speculators are currently ganging up on some countries in Europe right now and driving up yields, and that therefore policy makers have to step in. In our model, there is nothing evil, of course: debt buyers simply have to take into account that the country cannot roll over its debt in the future. The buyer's strike itself can be self-fulfilling: if buyers go on strike, then the country defaults, and because the country defaults, then going on buyer's strike was a good idea in the first place, since buyers will not get their money back from a country that just defaulted. This coordination problem gives rise to multiple equilibria. We introduce a bailout agency into the model, which really is simply a large investor. The bailout agency seeks to earn the market return just like everybody else, but it's large, right? So it can promise to be there even if nobody else is there to buy the debt of the country. So, if everybody else goes on a buyer's strike, this agency does not go on strike, and if their intervention is large enough, the country will not default, and the other buyers find that they should not have been on strike. The intervention solves the original co-ordination problem and gets to the good low-yield, no-strike equilibrium. Our bailout agency is not losing money or is not unduly profiting from the situation: they are just getting the market return on their portfolio. We then analysed how large the

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\* The views expressed in this article are those of the author(s) and do not necessarily reflect the official view of the Magyar Nemzeti Bank.

<sup>1</sup> COLE, HAROLD L. AND TIMOTHY J. KEHOE (2000), "Self-Fulfilling Debt Crises", *Review of Economic Studies*, vol. 67 no. 1, pp. 91–116.

<sup>2</sup> ARELLANO, CRISTINA (2008), "Default Risk and Income Fluctuations in Emerging Economies", *American Economic Review*, vol. 98 no. 3, pp. 690–712.

promised intervention would have to be. We also wanted to know at what point the bailout agency should get out altogether, as the situation is so bad that the country will default for fundamental reasons, not for the sunspot<sup>3</sup> reasons. It turns out that there's a range of debt where the bailout guarantees must become very large very quickly, almost to the point where this agency has to buy the entire newly issued debt of that country. A bit beyond that, it should get out completely though, because if the debt burden is too high to begin with, the country will default for fundamental reasons, even without the possibility of a buyer's strike. The lesson is that such an agency can help up to a point, but after that point, it should get out of it. The second lesson is that it has to do so at the right prices, taking into account that the country may still default due to fundamental reasons. The third lesson is that if the agency gets rid of this sunspot rollover risk problems, the yield will initially fall, but that then leads the country to borrow more and debt levels rise. To some degree, the default due to the coordination problems of a buyer's strike is replaced by fundamental default, because the country will have accumulated too much debt. The bailout agency eliminates the coordination problem equilibrium, but it will lower the default probabilities only somewhat. So if you want to get rid of default rates, that won't do the trick, but if you just want to get rid of the bad sunspot equilibrium, then this is something that may be reasonable to do. There are many more questions that one could ask, starting from this framework, and I hope I will get to think about them in the future.

*– You probably have strong views on the current euro crisis. Do you have any thoughts you could share with us on this topic?*

For full disclosure: my views certainly go beyond what one can solidly conclude based on serious research. But here they are. I don't quite like where the debate is going, I find it to be rather confused. Some say we have to save the euro. But what exactly does that mean? Duisenberg has been asked in the past what it means for the euro to fail. He pointed to keeping inflation stable as the single measuring stick. When people now talk about "saving the euro", I don't think that this is what they mean. Is it saving the financial system in the Eurozone then? That actually is part of the mandate of the ECB. Does "saving the euro" mean that you want to save countries from defaulting? Where is the connection? Does "saving the euro" mean you want to prevent countries from exiting the Eurozone? Why would it be so terrible if, say, Greece joins Denmark and other European nations as being outside the Eurozone? How is that endangering the euro? In any case, it would be nice if that got clarified: only then can one find the appropriate policy response. Here is one example. If you want to keep the currency stable, then it is probably a bad idea to print lots of euros and distribute them against bad collateral: this can create inflation down the road or losses for the central bank. So if you are really worried about a stable currency, if you use the measuring stick of *Duisenberg* (*Wim Duisenberg, first President of the ECB between 1998 and 2003 – the Editor.*), then that's not what you should be doing. But clearly that is what the ECB is doing, so *Draghi* (*Mario Draghi, President of the ECB since November 2011 – the Editor.*) and the ECB decision-makers apparently think about it in a different way. Do they have the financial system in mind; is that what they want to keep stable? I don't think so either. In the long-term refinancing operations, the ECB pretty much encouraged all the banks to purchase the debt of their own country. Now if you have a fragile bank in Greece, the last thing you ought to buy is Greek bonds. If you have a fragile bank in Spain, the last thing you ought to buy are Spanish bonds, right? You should encourage the bank to get rid of those Spanish bonds and buy German bonds instead, if you want to keep the bank stable! Instead, this is done to lower the yields on Spanish sovereign bonds and to prevent Spain from defaulting or from exiting the Eurozone. But seriously: would Spain or Greece wish to exit the Eurozone, if it came down to it? I don't think they would. I think it would be bad for Spain, I think it would be bad for Greece to get out of the Eurozone. They get a lot of transfers while they are in the Eurozone, and contracts would be written in terms of euro anyhow: they have no incentives to go out. The one country that has incentives to get out of the Eurozone is Germany, because it is guaranteeing and ultimately paying a lot of money to maintain the current situation. To me, that would be the end of the Eurozone and the end of the euro as we know it, if Germany decides to exit. So, it seems the ECB is playing with fire by starting to bail out Southern European countries, and bailing out the banking system there: this all could encourage a German exit. The ECB is in violation of the original treaties, it's a violation of the Maastricht treaty, and their policy is a violation of the dominant authority of parliaments on fiscal matters. Parliaments should set expenditure and taxes, not the European Central Bank. It could easily happen that the European Constitutional Court decides that the ECB is encroaching on the budgetary authority of the parliaments. It could lead to a situation where

<sup>3</sup> Sunspot means that the triggers for interactions between economic agents' behaviour and, consequently, possible equilibria are random rather than fundamental events.

Germany has no choice but to exit, if the German Constitutional Court agrees that such a violation has taken place.<sup>4</sup> So, if Draghi wants to save the euro, then that's not what he wants to happen. If Draghi wants to be on the safe side, he shouldn't play with fire here, but he is. So, clearly he has some rather different objective in mind. I described one piece of my research, where one can perhaps view bailouts and guarantees as a way to achieve a good equilibrium, ruling out the buyer's strike equilibrium. One can think of the ECB as being this large outside investor that can guarantee this outcome. If the ECB wants to make that argument, then they should be very clear about it. But then, they have to be very sophisticated, they have to be very careful. They have to make sure that the only thing they do is to rule out the sunspots. But giving handouts to banks that have gambled with their assets and then lost, or transferring money to countries that don't get their matters sorted out sets all kinds of bad incentives. You create moral hazard down the road. I believe that Spain was well on its way to try to get its fiscal house in order. But now the ECB says, don't worry; we'll buy your bonds. But then, politically, inside Spain, it is going to be impossible to argue for cuts because you know the ECB is going to buy the bonds if all else fails. Who in his right mind in Spain will now argue in favour of the necessary, but tough political choices, if an outside rescue is available? But somebody has to pay for that, these resources do not come for free. Personally, I am therefore in favour of going back to the original rules and to say: well, if a bank falls, let's not worry too much about it. We have a resolution mechanism for failing banks that has existed and worked for a long time. If you have a solvent, but illiquid bank, by all means lend to it, but if the bank is insolvent, you need to take it over, clean out the shareholders and bondholders, and see what you can do with the remaining assets, possibly finding a willing buyer. If a country is insolvent, you don't bail it out, you let it default. Default of a country is nothing terrible; it's not the end of the world. It happens. Investors that own these bonds lose money, but that is how markets work: sometimes you gain, sometimes you lose. If we indeed went back to the original rules and allowed such defaults, we would probably see a thunderstorm. It would be pretty bad for a while, but then the problems would clear out and we would continue with healthy banks, healthy fiscal balances, no looming threat of sort of a large debt purchase by the ECB and so forth. Then, everything would be fine again. A brief period in which things are pretty bad and then back to a good situation: to me, that sounds much better than to keep kicking the can down the road, creating all the moral hazard and keeping all those zombie banks alive. Look at Greece. They tried to do the Greek bailout, but it is clear that Greece is going to default again or that more money needs to be poured into it from the outside. Why? Do it once, do it right, get it over with, proceed to the future: that is my view.

*– Maybe we can move back to your favorite research area. It's about recent efforts trying to improve DSGE models (broadly interpreted) using financial frictions and other types of frictions. Do you think this is the right way to go, preserving the core and fiddle with additional bells and whistles, or do you see something very different happening in the near future? Or should something very different happen?*

I believe that one should let many flowers bloom. So whenever somebody comes up with an interesting new way to approach a problem, I'm excited. George Soros has created an Institute for New Economic Thinking. Good. I like new economic thinking. New economic thinking is always a good idea, that's what we ought to do as researchers. But it's hard, right? And, you know, just because something is new does not automatically mean it is good. So, what we really need is good new economic thinking. If somebody comes up with something new and fantastic, go for it. But while some of us are doing this, we should also see whether we can amend the approaches used so far. There was a reason it was successful: it may well be possible to fix it a bit, and that may be the better way forward. So, let some try this, let some try that and let's have a race and let's see what works best in the end. Currently, many people in the profession try to tackle this from many different angles. There are many approaches on the table, and that makes it fun for researchers, it makes it confusing for users of research, and certainly more confusing to the outside world, but there are lots and lots of approaches that people try for different questions.

*– Do you see any of these new approaches having a chance to become as successful as the current paradigm?*

The question of "success" always needs context. One is able to do a number of things reasonably well within the current paradigm, with the current set of models. These models don't live in some abstract space; the models always have a purpose. Economists are there to answer questions, and different economists answer different questions: therefore,

<sup>4</sup> The interview was made in early August. The German Federal Constitutional Court gave the green light for the ECB's bailout fund, the European Stability Mechanism (ESM), in mid-September.

different models serve different questions and purposes. Some models are very useful for answering these questions, and terrible for answering some other questions. Our profession has been blamed for not seeing the 2008 crisis coming and journalists have blamed our models for being inadequate for predicting it. But often, that was not the aim or the purpose for these models in the first place. Perhaps professional forecasters should be blamed: forecasting is their job. Let's ask why they missed it! But academics like me are for most parts interested in thinking and explaining some observed phenomenon. I am not in the business of forecasting. Instead, I see the events that have taken place in 2008 and in 2010 and the interesting questions that arise from that. I may then go ahead and write down a model that answers these questions. Such a model may or may not be particularly helpful to institutions – and I think central banks are such institutions, or the IMF or the OECD – where the exercise is to think ahead what is going to happen. If these institutions need better models for their tasks, they might want to think about ways of enticing academics to help them there. So, here is an interesting question. If you could take a time machine, given that we know now, and then travel back to 2006, what would be the key tools or the key models that you would take along, what would be the key things to look at that would help you predict the events as they unfolded? I fear that even the recent financial-friction models wouldn't help much. Perhaps you would want to look at things like house price-rent ratios, price dividend ratios, or the ratio of credit to GDP: these could all be telltale signs. There may be things that build up to a point where they become very fragile when something potentially large could happen. This idea has been around for a long time, but we have not completely sorted that out within our leading models. The current slate of DSGE models is more suitable for ex-post reasoning. Researchers feed data into these DSGE models, like spreads on financial markets, and then some of these DSGE models interpret that as increasing financial frictions. At best, you can then analyse the consequences of that. But it is probably fairly impossible right now to predict, say, two years ahead of time that this increase in spreads is going to happen. So, you couldn't take one of the new models back to 2006 in your time machine and hope to be able to predict the emerging crisis a year later. Again, that is OK if what you are interested in is thinking about these facts afterwards as most academics do. It is not OK in an institution that tries to get ahead of the game. So, to answer your question, which approach will be successful or not in future: for that, we first have to be clear about the purpose, about what it is that we wish to achieve here, and what the approach and the model should be for. Perhaps it would be a good idea for central banks or the OECD to very precisely formulate what it is that they need. I believe they have the resources to do that, right? Then get academics; give them the small little rewards that they need to start thinking in those directions and hopefully better tools emerge.

*– Macro modeling has been made dramatically more accessible by specialised software, including your own Toolkit and Dynare. Some argue that the ready availability of packaged code lowers the entry barrier too much, and leads to large numbers of mindless applications. Do you see this happening, and if yes, is it a problem?*

You know, I wrote these "toolkit" programs a while back. I wrote them for myself and then posted them on the web, just in case others found them useful too. They became remarkably popular. Obviously, I was happy about that. Lots of people used this "toolkit", other people even developed it further and did ever more sophisticated things with them – good! I was thrilled. More recently, *Michel Juillard (Banque de France – the Editor)* in France developed Dynare. I think it is more of an open source software, so a number of people have played a role in developing that code. Dynare is more recent than my programs, and it can do many things that my "toolkit" programs cannot do. Great, that's technological progress! Personally, I can still do certain things with my programs more easily than in Dynare. Others only use Dynare and that is just fine too, of course. It certainly has lowered the entry barrier, and it's easy to do many things. The quality of your results depends on what you do with it, of course! Computer scientists sometimes say 'garbage in, garbage out'. If you put in a bad model, you get bad output, even if the output looks super-sophisticated. It is still the human input that matters most. Still, these tools are a fantastic achievement. It made macroeconomists more serious about data, made them more serious about estimation, and about solution methods and understanding macroeconomic dynamics. It elevated the level of the debate considerably.

*– Are you interested in policy questions; are you involved with macroeconomic policymaking? Do you advise central banks in Europe or in the USA?*

I have some sort of contract with the Bundesbank and with the Chicago Federal Reserve Bank, but I would not say that I advise them on policy making. It just means that I go there and hang out with the researchers and talk to them. Perhaps, I give a presentation of my research, or I talk with them about their research, and we talk about economics

and monetary policy in broad terms. The key policy makers are not involved there, though. I get the impression that a number of them do not keep much in touch with the researchers. A key exception is *Otmar Issing*, who was on the Executive Board of the European Central Bank from 1998 to 2006. He talked to academics quite a bit, I give him a lot of credit for opening the ECB up to the debate with the scientific community; he's a real hero in all of this. I don't know why policymakers do not do that more frequently. They are perhaps smart, they are certainly busy, and they have many things to do. But for many policy issues, it is key to think through the underlying economics. It is unclear to me whether they talk to economists much at all, but my impression is, they do not do it much. It would probably be helpful, if they did it more. It always puzzles me that many of the central banks, including the central bank of Hungary, have excellent and sophisticated economists on the research staff. They are in touch with academia, they have great analytical skills that strike me as very useful for the policy issues at hand, but somehow, these insights do not get used enough at the top level. In central banks, it works at least somewhat. In fiscal policy, I don't see that it is working at all; it really is hard to detect much meaningful interaction between fiscal policy makers and the economics research community. Some colleagues claim it works for labour market policy, but I remain sceptical. How economic wisdom and good economic analysis has a chance to get into policy is a mystery to me.

*– You used to have a blog if I'm correct.*

Yeah, I had a blog with the *Handelsblatt*, a German daily newspaper on matters of economics. From my perspective, it was a hobby, not my main activity. But I found it refreshing. I might read something in the newspaper about some economic policy, and I might think that maybe I have something to say on that as an economist. The blog was great for that. I wrote it up and two hours later, it is on the web and the world knows about it. It became too much of a chore for me to clean out spam comments: they kept appearing and I had to erase them, they had absolutely nothing to do with the blog content. It looked like robot programs posted them. Removing them required time. So at some point I just said, look, this has been fun, but let me stop here, and so the blog was closed. I guess it had some impact. At some point, in September 2008, I was very worried about a bank run in Germany and I made some rather clear-cut comments about that in my blog. Someone at *Handelsblatt* thought that this was too dangerous as a blog entry, and so they erased it. But the moment they erased this blog entry, readers noticed, the number of visits to my blog shot way up, and readers found a way to read the entry on some autostorage site or so. Erasing that entry made it actually very popular, and many more people read it than if *Handelsblatt* had not done anything. It was a fascinating lesson in Internet culture for me.

*– Macroeconomics has been heavily criticised for not being able to predict the crisis. Do you think this criticism is justified? What do you think were the main problems with pre-crisis macro?*

This question should really go to the professional forecasters. As an academic, I am not in the game of forecasting, it is not my aim. But even when one does warn, does one get heard? Let me mention one episode. In 2003, the economics unit within the European Commission organised a conference on the interplay between central banks and fiscal policy, and they commissioned me to write a paper on that. It was supposed to be an academic piece, but on the level where you could teach it to undergraduate students in economics or where someone with a bit of training in formal economics could read it. So, I wrote a paper called '*One Money, But Many Fiscal Policies in Europe: What are the Consequences?*' The conference papers were published in a conference volume and the paper was generally available on the web. The paper has two parts: let me talk about the second half of it. The second part asked: what will happen, if a member country of the European Monetary Union goes into sovereign default or where such a sovereign default becomes a serious possibility? What should the European Central Bank do? What are some of the issues that one needs to think through then? I didn't have enough fantasy to think this through entirely, plus there was a deadline to finish the paper. But at least, I raised the issue, I presented it at the conference in Brussels, and there were research people somewhat close to policy in the ECB and other institutions seeing it being presented. So, if any of the policy people would have thought that this is an issue worth thinking more, or if any journalist had picked it up at that time and figured that this is worthy of more debate, there could have been some follow-up. But there was not, there was zero interest in that issue then. What I learned from this is that as an academic, if you warn of bad developments to come while the sun shines, you are Cassandra and it is very likely that you will simply be ignored. I surely was not the only one with such an experience.

*– It has been argued by Peter Howitt that the connection between central bank practice and academic macro research is much weaker than academic economists would like. What are your views on this, and how should interaction be improved?*

I think that central banks are actually doing a pretty good job here. Sure, things could be even better, but central banks in particular have gone a long way. 30 years ago, I believe they were not particularly sophisticated in terms of the academic debate. Nowadays, many central banks have high-level research staff, who are also part of the academic community, write research papers, read research papers, and interact with the academic research community. There is a lot of interaction between the academic research community and the central bank research community. This in turn has led to a substantial shift in the questions that macro researchers are interested in. For example, there is lots of research on the effects of monetary policy shocks, and one of the reasons is that central banks were interested in that research. By contrast, there is a lot less research on the many issues in fiscal policy. Researchers there have not received the same kind of attention by policymakers, and may have turned to other issues as a result. I genuinely believe that fiscal policy could be improved considerably, if there was the same level of interaction there. Why not have research staffs in finance ministries and economics ministries like they exist in central banks, and give them the time and resources to be part of the academic research community while also doing their work for the ministries? The next tricky part, of course, is how to utilise this economic expertise inside for actual policymaking. I do not know enough about that process. I often think that it would be good for high-level policymakers to have a PhD in economics themselves and to actually have, say, published some papers in economics. With that, they have an appreciation for how research works and how to make the best use of their research staff. There is no push button and you get the perfect answer to some current issue. Rather, it is an ongoing communication that can work well. That helps to sharpen the issues and helps identify the key forces at work. The leadership of central banks underutilises that resource too. But if you compare that to fiscal policy, to labour market policy, the difference looks like night and day to me. Central banks should really be the role models for other policy areas.

*– You spent many years in Europe before moving to the United States. What is the current state of the profession in Europe in your view? Is there a convergence across the Atlantic, or is the USA still the place to be?*

You know, there are many wonderful economists in Europe, there are some very good departments in Europe, but it's still a lot thinner in Europe overall. The density of top-notch economists in the United States is just amazing. Sometimes it feels to me that if you take all the macroeconomists that are in the Chicago area and compare them to the macroeconomists in all of Europe taken together, that the greater-Chicago crowd might hold up well in terms of insight and research activities. Perhaps then, Chicago is all of Europe packed in one city in terms of macroeconomic research. It is terrific to be part of that community. In Europe, the CEPR (*Centre for Economic Policy Research – the Editor*) has done a great job in getting people together, but it is always a challenge. There may still be a long way in Europe to go. The reasons are many. But it would be entirely feasible for Europe to be on par or even ahead. Europe is as rich as the United States, and there probably is a more fertile climate for intellectual debates here. I enjoyed living in Europe, and many European-born economists working in the United States do too. So, there is a lot of potential in Europe, genuine opportunities. Some universities have become very entrepreneurial and make use of that.

*– Any other thoughts?*

I think that's it. It's the first time that I am at the central bank of Hungary; it's an impressive place, and I wish you much success. I spoke to many people here, I found them to be very insightful and interesting, and I really enjoyed being here. I am very grateful for the invitation.