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Walter Adolf Jöhr Lecture 2009

Professor Charles Wyplosz, Ph.D.

Macroeconomics After the Crisis

Dealing with the Tobin Curse

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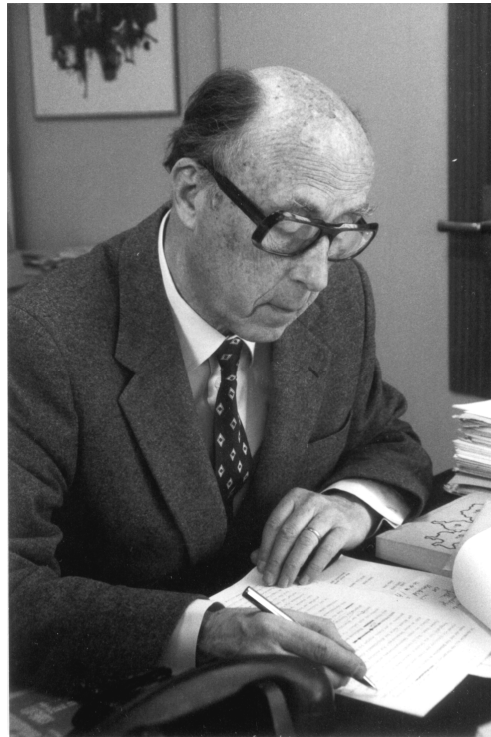
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Walter Adolf Jöhr Lecture

University of St. Gallen



Walter Adolf Jöhr

Since 1988 the Institute of Economics has organized the Walter Adolf Jöhr Lectures at the University of St. Gallen, Switzerland. From 1937 onwards, Professor Dr. Walter Adolf Jöhr (1910-1987) devoted fifty years of service to our University, the legacy of which remains visible in many ways up to this day. He was one of the founders of the Institute of Economics. During his tenure as President of the University of St. Gallen (1957-1963), he orchestrated the planning and construction of the University's Main Building; visionary in its integration of art and architecture, it remains a widely-acclaimed feature of today's expanded campus. Many ground-breaking publications in Economics and adjacent fields also bear witness to the achievement of Walter Adolf Jöhr, the dedicated researcher.

Prof. Charles Wyplosz, Ph.D.*

Macroeconomics After the Crisis

Dealing with the Tobin Curse

It is a great honor to be here today, especially as I am the first non-German speaker to be invited to the prestigious Walter-Adolf-Jöhr Lecture series. I come here as a neighbor from Geneva where I have been teaching and conducting research for the last 18 years. As you can guess, Geneva is not the best place to learn German, which I did not even study in school because I chose to learn Latin and ancient Greek instead. I must also confess that I do not speak either Latin or ancient Greek. But I speak economics, an almost truly international language.

This is a great time to be a macroeconomist, like being a doctor during major epidemics. Suddenly everyone asks for your advice and you feel important. Not for very long, though. Because you have to answer questions and you quickly end up repeating “I don’t know”. The crisis acts a sharp lens projecting an uncompromising image of the state of knowledge. My talk will be about macroeconomics, because this is what I am supposed to know, but also about finance, because the two fields are deeply inter-twined, or should be. Early on in my career, I tried to master both macroeconomics and finance, because I was enormously influenced by Jim Tobin’s observation that the most important challenge for research was to bridge the growing gap between macroeconomics and finance. Tobin himself had made seminal contributions to both macroeconomics and finance theory, and even to econometrics. Quickly, however, macroeconomics and finance became so specialized that mastering both fields appeared to me as mission impossible, and I chose macroeconomics. But I deeply believe that the divorce of these two fields is probably the fundamental reason for the current crisis, this is what I call the Tobin curse. Financial specialists went their

* Professor of International Economics at The Graduate Institute of International Studies and Director of International Centre of Money and Banking Studies in Geneva, Switzerland

own way, relying on highly sophisticated finance theory and taking macroeconomics as exogenous, while most macroeconomists assumed that financial markets were just a side-show, which could safely be taken as exogenous or described in a rudimentary way.

As if to illustrate the Tobin curse, the crisis came in two steps. First a financial crisis, then an economic crisis. During the financial crisis, economic forecasters typically announced that the macroeconomic impact would be negligible. For many years, asset returns were exceeding the growth rate of the economy and being reinvested in asset markets. Financial markets and financial theorists were not really puzzled that, if pursued indefinitely, this situation implied that, eventually, asset holders would receive all of the GDP, and then more. When this impossible development was revealed impossible, the financial crisis got under way. The next big question then was what impact the financial crisis would have on the real economy, on the activity level and employment. This was the challenge for macroeconomists.

What went wrong?

What is particularly frustrating is that both crises, the largest ones since the Great Depression, have not been unforeseen by mainstream economists. Even after the onslaught of the financial crisis in August 2007, financial economists generally failed to realize that major players like Bear Stearns and Lehman Brothers would disappear a year later. And even after the October bloodbath, most macroeconomists still did not anticipate the coming recession. Some economists did predict a crisis, but not the crisis that we have seen.

Forecasting is the profession's curse. All our empirical knowledge tells us that we are unable to make accurate forecasts. Yet, what the public and policymakers ask from economists is that they make forecasts. As a profession, we are squeezed between the Charybdis of making forecasts that will often prove inaccurate and the Scylla of turning down demand for our services. While we know that our precision is not high enough to predict normal business cycle, we could have hoped not to miss a massive shock, and yet we did. Part of the reason is that our tools are based on the post-war experience, because we do not have good enough data to go further back in the past. As a result, we do not have in our collective empirical

knowledge enough formal information on events like the Great Depression and, therefore, we are not equipped to foresee this kind of event. The paradox is that, over the last two years, each step towards disaster came as a surprise, but then it usually took a few days, or even much less to figure out *ex post* what had happened. It is a common joke that economists are good at forecasting the past, not the future. That is quite true: we can explain most events as they happen, but we cannot see them coming. This is already an enormous progress in comparison with the 1930s when most economists could not even understand what they were seeing. This ignorance led to a massive research effort, which resulted in the creation of a new field, macroeconomics, which then nurtured finance theory. The works of Maynard Keynes, Irving Fisher, Jan Tinbergen and many, many others have radically expanded our understanding, but the current crisis shows that it is not enough. It is a safe bet that the next giants who will change our field are already at work.

Progress will have to start with a careful pinpointing of where we are wrong. Keynes realized that we could not simply assume that prices were promptly bringing markets back to equilibrium so that departures from full employment would be temporary and self correcting. We may disagree with some of the conclusions that he drew from that observation, or rather with the way his muddled understanding was interpreted and enshrined into simple models, but his central diagnosis was on the point. More than seventy years after the publication of his masterpiece, *The General Theory*, and despite considerable efforts to challenge this diagnosis, price rigidity remains the departure point of macroeconomics. It would be great if we could come up with such a powerful single diagnosis once again, and start rebuilding from there. My impression is that, this time around, we will have to look more at the details than at the big picture. Eichengreen (2009) even argues that the problem is not as much insufficient knowledge than a selective reading of existing knowledge.

Finance Theory in Crisis

In many ways, finance theory is the easiest field to diagnose because its flaws have long been identified. Finance is about risk and uncertainty, and this is indeed where modern finance theory starts (“modern” may soon be changed into “old”). The standard assumption is that financial markets are

continuously buffeted by random shocks. Crucially, these shocks are independent from each other and they are also assumed to be distributed along a bell shape, this is called the normal distribution. Both assumptions are very convenient from a mathematical viewpoint. They allow finance theorists to imagine all sorts of financial instruments, compute their properties and establish their prices. Then finance professionals can evaluate the characteristics of myriads of portfolios, including those held by banks. In particular, they routinely perform value-at-risk tests, which evaluate worst case scenarios, under the two assumptions.

The theory is very rich, it can deal with a virtually infinite number of shocks, so you would believe that it prepares us for anything that can plausibly happen. Wrong. Because the two assumptions are simply wrong. It has been known for a long time that shocks are not normally distributed. A large literature has been devoted to identifying and exploring what finance specialists call anomalies. Anomalies really describe the reality as it is, not as finance theory assumes. For instance, it has been known for a long time that extreme events – good and bad alike – are more frequent than predicted by the normal distribution. This goes under the poetic name of fat tails. Well, the valuation procedures used by banks, and sanctified by their regulators as part of the Basel II agreements, ignore fat tails. Worse, even the possibility that shocks could all turn sour simultaneously is ruled out by the assumption that they are independent. In 2007, it just so happened that all the shocks suddenly ended up at the bad end of the fat tail. That's why millions of people have been thrown into unemployment, a source of considerable individual distress. That was assumed not to happen, and yet it did.

An interesting question is why banks, regulators, investors and everyone used these assumptions, which were known to be inadequate? Why were these models and their builders widely respected and followed? Good question! One answer is that the math is so sophisticated that it discouraged criticism or, to borrow from Danielsson (2009), that “complexity kills”. A slight variation on this theme is that the mathematicians who built these valuation techniques knew nothing about finance and economics, while the top bankers and their regulators, who were supposed to know finance and economics, knew nothing about mathematics and were not willing to show it. But us, academics? Well, same again. If you were questioning the state of the art, your colleagues and students would infer that you are not good enough to master the techniques. Or worse, you were making a lot of mon-

ey selling your expertise, so it would be silly to undermine your reputation by looking outlandish.

Anyway, finance theory will have to start again and that will not be easy. Dealing with non-normal shocks can be done with modern technology, and some researchers started before the crisis. The problem is that finance theory will become even more opaque and more complex than it already is. I am not sure that it is a good idea, but I am sure that it will happen because the trend toward increasing complexity is unstoppable. Thinking seriously about those shocks-that-happen will be harder, because it means answering Tobin's call of integrating macroeconomics and finance. If that call has not been answered during the last fifty years, it does not mean that smart people did not try, it means that they failed, so it must be really hard to make progress where it is most needed.

Meanwhile, it is extraordinarily important that finance specialists, theorists and practitioners, be reminded every day that shocks do not occur randomly. For several years before the crisis erupted, macroeconomists were debating the housing price bubble and the existence of large global imbalances. Invariably, they concluded that housing prices would have to fall and that the unsustainable US deficits and Chinese surpluses would not disappear without serious financial upheaval. Bankers were told. Then housing prices started to fall in the US and in Ireland as early as the third quarter of 2006 and, with few exceptions, bankers did not wink until the crisis got under way in August 2007. This is when all the shocks simultaneously migrated to the bottom end of their fat tails. No one should have been surprised, except financial theorists who believed in financial theory.

The Challenge of Macroeconomics

The failure of macroeconomics is more ambiguous, at least to a macroeconomist like me. Let me first clarify one thing: we currently have two fields of macroeconomics. There is modern macroeconomics. Like finance, it makes strange assumptions and pours heavy math upon them. It has nothing to say about the origin and propagation of the crisis because the events that took place are assumed not to take place. I will not refer to this part of the field, which should be dying shortly now (but will not!). I will instead refer to

old-fashioned macroeconomics, which is described in most textbooks, especially the best ones, like those by Manfred Gärtner and myself.

We have long known about what we call lending cycles, sometimes called boom-and-bust cycles. They involve a period of expansion and euphoria, with unsustainable credit growth and excessive housing and asset prices. Eventually, prices start falling, prompting panic and financial distress, which all ends up in a recession. By and large, this is precisely what happened, and this is why macroeconomics is not in as bad a shape as finance. The problem lies elsewhere, in our inability to prevent the financial crisis from triggering the economic crisis.

I will start with a confession. In the summer of 2007, I was not particularly worried. Even though I knew little about subprimes and asset-backed securities, I was not surprised that the US mortgage market was quickly folding and that newly-invented financial instruments had spread the costs worldwide (Wyplosz, 2007a). I thought, then, that we had the knowledge to prevent serious damage to the economy. I was initially reassured by the quasi-instantaneous reactions of major central banks. Not only did they promptly intervene to try to stabilize the financial markets, but they also took many innovative and daring steps. This was going to showcase the usefulness of economics, I thought. But financial markets were not stabilized and the central banks were quickly exhausting their room for maneuver as interest rates were being brought down to zero. I also started to become concerned with government reactions. They were mostly timid and, more importantly, they were not willing to force banks to recognize their losses (Wyplosz, 2007b). The failure to quickly clean up the banking system, which is not yet done today, except maybe in Switzerland, is the main reason for the economic crisis. Here again, we knew the danger of inaction since it had been amply illustrated by previous lending cycles in Japan and in Sweden in the 1990s.¹

In my view, the main failure of macroeconomics is that the risks of a financial meltdown were not adequately perceived and, when it happened, its dangers were not appropriately assessed. Unsurprisingly, the main soft spot of the field lies at the intersection of macroeconomics and finance, the Tobin curse.

¹ A comparative analysis is available in Jonung et al. (2009).

Part of the reason is that the postwar experience with financial crises is rather reassuring: in 1987, 1993 and 2001 strong policy interventions managed to contain the impact of financial stress. None of these financial crises, however, were as severe as the current one. The main reference, is 1929 and the Great Depression.² Even though this episode has been the object of considerable research – and some of the best scholars of this period are currently making policy decisions in Washington, no doubt fully aware of the precedent – most of our standard empirical knowledge is based on postwar data, often in fact on the last twenty years. Because crises occur rarely, their impact on standard empirical work is either feeble or inexistent. As a result, we patently underestimate their impact.³ Thus, the second soft spot of macroeconomics is the insufficient attention paid to history. Dealing with this problem will require quantifying old facts and building databases that non-historian economists can start using, as Reinhart and Rogoff (2008) have started to do. Because this is a highly time-consuming endeavor, research funding ought to weigh in heavily in the coming years. Dedicating to economic history a microscopic portion of the costs of the crisis would make a huge difference as far as knowledge is concerned and it could make the next crisis lest disastrous.

Even then, there is more knowledge at hand than is being used by policymakers. The often-impaired link between science and action is the third soft spot of macroeconomics. I say “between”, not “from ... to” intentionally, for reasons that should be clear soon. Let me start with the “from science to policies”. A serious problem is the economists’ pathological tendency to disagree about just everything, and to do so in public. This means that, on any issue, policymakers will hear as many views as they consult economists. Not only does this confuse them but, probably worse, it gives them the green light to do whatever they please, often for the wrong reasons and with bad results. Here economists could take a leaf from the medical profession, which operates through consensus conferences. But when doctors make mistakes, they kill their patients while when economists make mistakes, they merely ruin them.

How about the other way, from policymaking to science? We often know, or think that we know, what should be done. Last October, several hundreds of us signed a letter to European leaders (Alesina et al., 2008) calling for cooperation for bank recapitalization. The letter concluded that “the prob-

² A concise presentation of the parallels between now and then can be found in Bordo (2009),

³ Econometrically, they are the error terms.

lem is not a lack of understanding of how to stop financial crises, the problem is a lack of political will". Well, the problem with economists – I signed the letter, by the way – is that they underestimate political constraints. It is all very well to give fine advice, but we also need to understand whether the policymakers can do what we ask them to do. For example, we know that the crisis will not be over until the US government injects fresh capital in many of its big banks. But this means partial, or complete nationalization, which the US Congress will never accept, or not until the situation has become desperate. The challenge, then, is to understand how to recapitalize banks without any form of nationalization, which is bound to be costly. The job then is to find the least costly solution that is politically feasible. At a very general level, we have second-best theories but more work is needed to make them practical.

Conclusion

Let me conclude with a word of precaution and a warning. The crisis is a disaster of historical proportions which occurred because many things have gone wrong. Ordinary people are angry because they suffer, and they want to know why. There is a real danger that they buy into simplistic answers offered by populists. Simplicity has a broad appeal because complexity is seen as the turf of the elites, which it is in many ways. Populism is dangerous because it offers simple solutions that will ultimately fail but can destroy much of our complex world, which has brought peace, prosperity and more equality than ever in history. We have seen how the world can go down that road after the last great recession. I do hope that history does not repeat itself.

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