

# Lessons we have learned from the crisis

**Inaugural lecture for the academic year  
2014/2015**

A dialogue between **Àngels Fitó**, dean of the UOC's Economics and Business Studies department, **and Jordi Galí**, director of the Centre de Recerca en Economia Internacional

Barcelona, 29 September–10 October 2014

<http://w.uoc.edu/inaugural14>  
#UOCinaugural

---



---

# Contents

Introduction	3
Learning from the crisis	4
In 2 minutes	5
A dialogue	8
Index	36



---

# Introduction



**Josep A. Planell**  
UOC President



**One of the main lessons I have learned from the economy at this time is the need to do things differently. Galí talks about how the leading macroeconomic theories have had to be reassessed and evolved due to this crisis. We all have to do the same.**

Dear all,

Introducing the inaugural lecture is a special moment for me. It marks the start of a new academic year that is still a blank page. I want to welcome you all at the start of this new year, and I especially want to welcome those students who have enrolled at our University for the first time.

The inaugural lecture is also a time to share knowledge as a network and over the net, reflecting the UOC's values. Indeed, these values include analysing, questioning and finding answers in the world that surrounds us. And right now the crisis is one of the main concerns for people.

Jordi Galí, director of the Centre de Recerca en Economia Internacional (CREI) and member of the UOC's Scientific Research Committee, is to start this lecture, and I say "start" because it is open to any contributions that can enrich it. And he does so by looking at some of the things we have learned from the crisis.

One of the main lessons I have learned from the economy at this time is the need to do things differently. Galí talks about how the leading macroeconomic theories have had to be reassessed and evolved due to this crisis. We all have to do the same.

This flexibility and creativity forms part of the UOC's DNA. Since the start – next year will mark 20 years! – our University has always aimed to adapt itself to the needs of its students and society in general. And this has led to it constantly transforming itself.

The future is full of opportunities if we know how to see them. I invite you to play an active part in this lecture, both by commenting on the contributions from the speaker and by sharing your own personal experiences of the crisis through any of the channels available.

Have a great start to the year!

---

## Learning from the crisis

The Universitat Oberta de Catalunya inaugural lecture marks the start of the new academic year. But not just this. It is the time each year when the UOC community comes together to hear a leading expert debate and reflect on an aspect of the reality that surrounds us. For the academic year 2014/2015 we were accompanied by the economist Jordi Galí, current director of the Centre de Recerca en Economia Internacional (CREI), who invited us to analyse our current situation in terms of the economy.

The speaker was accompanied by Àngels Fitó, dean of the UOC's Economics and Business Studies Department. Together they talked openly about the crisis in terms of macroeconomics and reflected on the changes arising and the lessons learned. Thus, the crisis acted as the focal point for the lecture – a crisis which, far from pushing us under, has opened our minds to how to build a new world full of challenges and opportunities.

You can find the video and the transcript of the dialogue between Jordi Galí and Àngels Fitó in this document.

---

## In 2 minutes



The origin of the financial crisis is clearly associated with excessive growth in housing prices in many countries.



How can we combat bubbles? The first step is to place restrictions on , the finance purchasing of assets.



As for the crisis, I think the European Central Bank has responded appropriately.



We are far from reaching a consensus on what model should replace the New Keynesian model.

---

## Video



<http://youtu.be/Sc7VVr5bQRw>

## Dossier

Dossier on Jordi Galí [prepared by the UOC Library]: <http://biblioteca.uoc.edu/en/resources/jordi-gali-inaugural-lecture-2014-2015>





Àngels Fitó and Jordi Galí.

---

## A dialogue

**Àngels Fitó:** Following a number of years of crisis, I think we have come to realize that we are facing a crisis that involves a number of different aspects and factors. We are talking about an economic and financial crisis, but also a crisis of values and of confidence. Indeed, from all these aspects of this crisis, which appeared first?

**Jordi Galí:** The origin of the financial crisis is clearly associated with excessive growth in housing prices in many countries, particularly the United Kingdom, the USA, Ireland, and Spain as well.

We associate this very strong growth in housing prices with the concept of a bubble, that is, the idea that the price of housing is increasing more than would be justified by the dividends it generates, which in the case of housing would be rent income.

This is also accompanied by very strong growth in credit, which leads both families and companies linked to the real estate sector – developers and builders – to take on a lot of debt.

What's interesting is that these two phenomena are mutually reinforcing. Strong growth in credit enables many people to have access to housing, which puts upward pressure on housing prices. As a result, prices continue to rise at a very fast rate.

At the same time, the increase in the price of housing supports the increase in credit. This is because banks believe any loans they provide are safe, since they're secured by the dwellings being purchased, the price of which is constantly increasing.

Insofar as rising house prices aren't justified by fundamentals, there comes a point where they stop increasing and in fact begin to fall. This is when the bubble bursts, to put it in familiar terms.

At this point, obviously, as prices begin what will be a very persistent fall, the incentive to invest in or buy housing decreases dramatically and there's a precipitous drop in the demand for housing.

---

In practice, this brings construction to a sudden halt and leads developers, builders and other affected parties – who are unable to sell the stocks of housing they have – to default on their loans. This, in turn, brings about a situation of tight liquidity and insolvency, or near insolvency, on the part of financial institutions. They need recapitalization, a reduction of credit, and this leads to a decrease in aggregate demand, a drop in economic activity, and a decline in employment. So we end up with a truly vicious circle, because the fall in employment leads to an even greater drop in consumption, aggregate demand, etc.

This is the origin of the current crisis and others that have occurred in the past.

> **Key words:** financial crisis, macroeconomics, credit, housing, bubble

> **Video:** <http://youtu.be/5jB-IAoaXjl>



> **Key ideas:** <http://w.uoc.edu/what-led-to-the-crisis>

“ ”

The origin of the financial crisis is clearly associated with excessive growth in housing prices in many countries, particularly the United Kingdom, the USA, Ireland, and Spain as well.

“ ”

This is also accompanied by very strong growth in , which leads both families and companies linked to the real estate sector – developers and builders – to take on a lot of debt.



**Insofar as rising house prices aren't justified by fundamentals, there comes a point where they stop increasing and in fact begin to fall.**



**This brings about a situation of tight liquidity and insolvency, or near insolvency, on the part of financial institutions. They need recapitalization, a reduction of , and this leads to a decrease in aggregate demand, a drop in economic activity, and a decline in employment. So we end up with a truly vicious circle, because the fall in employment leads to an even greater drop in consumption, aggregate demand, etc**

---

**Fitó:** There have been financial crises throughout history: the Crash of 1929, the financial crises in Japan in the 1980s and Sweden in the 1990s, for example. Have all these crises been alike?

**Gali:** Financial crises – crises that originate in the financial system – seem to be an inherent part of the way the capitalist system works. But we need to see things with some perspective, to see whether things have improved compared to the past.

Financial crises in the past – and I'm talking, for example, about before the First World War – happened much more often than they do now. In fact they were a regular occurrence and were strongly linked to banking panics. They were usually triggered because one or more banks in a particular country were seen as unsafe, and this would lead to a massive withdrawal of deposits by their customers. This would in effect lead the bank to fail, and the bank could end up taking a lot of other financial institutions down with it, leading to a contraction in economic activity.

Generally these financial crises and the situation banks found themselves in (banks affected by panics were in a weak position to begin with) occurred because they had expanded credit excessively to finance the purchase of some kind of asset. At some point, the financial booms that preceded these crises were

---

associated with growth, for example, in share prices, or in the price of housing, land, etc. When the price of these assets stopped rising, the banks that had extended a lot of credit to finance these speculative activities were in a situation of insolvency, or in danger of insolvency, and this would give rise to a banking panic.

In the 20th century, in the interwar period and particularly after the Crash of 1929 and the Great Depression that followed, the banking system was more strictly regulated. Up until that point it had essentially been unregulated. And most importantly, two new elements that tended to stabilize the system were introduced.

One was the introduction of deposit insurance funds. In principle, such funds guarantee that depositors will always get their money back. To the extent that people have faith in the fund, they no longer have an incentive to rush to the bank to take out their money. Deposit insurance prevents, or should prevent, this kind of panic.

The other element was the emergence, or spread around the world, of central banks, which had a clear mandate to act as lenders of last resort, among other functions. In other words, central banks are banks for banks. If a bank find itself in a situation of low liquidity, for example because it has to cover payments and the term of the assets it holds is longer, and they could be hard to sell, or selling them would put the bank in a situation of insolvency, it can obtain a loan from the central bank, which thus acts as a bank for banks.

This has greatly reduced the incidence of bank panics. In fact, in the latest crisis there have been very few bank panics in the traditional sense of the term.

> **Key words:** financial crisis, macroeconomics, credit, housing, bank panic, Crash of 1929, central bank, deposit guarantee fund

> **Video:** <http://youtu.be/RWsMGlyd4WY>



> **Key ideas:** <http://w.uoc.edu/financial-crises-in-history>



Financial crises in the past happened much more often than they do now. In fact they were a regular occurrence and were strongly linked to banking panics. They were usually triggered because one or more banks in a particular country were seen as unsafe, and this would lead to a massive withdrawal of deposits by their customers.



In the 20th century, in the interwar period and particularly after the Crash of 1929 and the Great Depression that followed, the banking system was more strictly regulated. Up until that point it had essentially been unregulated. And most importantly, two new elements that tended to stabilize the system were introduced. One was the introduction of deposit insurance funds. [...] The other element was the emergence, or spread around the world, of central banks, which had a clear mandate to act as lenders of last resort, among other functions.



This has greatly reduced the incidence of bank panics. In fact, in the latest crisis there have been very few bank panics in the traditional sense of the term.

---

**Fitó:** To understand financial crises, we need to understand the underlying speculation. What are speculative bubbles and how can we combat them?

**Gali:** To understand what a speculative bubble is, we must start by considering what we call “the intrinsic value of an asset”. When you have an asset – a share, a home, or a piece of land, for example – that asset has an intrinsic or fundamental value, defined as its present value, calculated by discounting

---

future cash flows generated by the asset. In normal circumstances, this value should match the market price of the asset, the price at which it's bought and sold.

However, situations can arise in which the market price of an asset is higher than its intrinsic value. The difference between the market price and the intrinsic value is what we call the “bubble component” or the “speculative bubble” in a given asset, whether it's a financial or a real estate asset.

One might well ask why anyone would want to pay a price for an asset that's higher than its intrinsic value. The answer is that people, investors, are willing to pay this higher price to the extent that they believe it will be possible to resell the asset at an even higher price in the future. This is what economists call a “rational speculative bubble”, because a rational investor may be willing to buy, or to pay a price that includes a significant bubble component, even though the bubble in question is bound to burst sooner or later.

And bubbles can burst in different ways. There may be a very sharp fall in the price of the asset. We've seen this, for example, in the case of assets that have very flexible prices, such as stock market assets. A stock market index can plummet in a matter of days. We saw this, for example, in 1987 in the United States, and in 2000. Asset prices can also fall more slowly. We've seen this happen to housing prices, for instance, during the latest crisis, although there's been significant variation in the rate of decline or adjustment.

So how can we combat bubbles? This is a very complex issue. The first step is to place restrictions on credit, the credit to finance purchasing of the assets whose price includes a bubble component. This won't necessarily stop the bubble from growing, or keep it from emerging in the first place, but what we've learned from our analysis of all past financial crises is that when asset prices eventually fall, the effect on the economy is more damaging when the assets were associated with excessive growth of credit during the boom period. Because when this is the case, the bursting of the bubble drags down the financial system. Even if we can't guarantee that a bubble won't develop and grow, by placing restrictions on credit when these situations arise we can at least avoid excessive growth of the financial sector and the resulting knock-on effect on the real economy.

Some organizations, such as the Bank for International Settlements, propose that during speculative booms, when prices are rising and the bubble is inflating, central banks should raise interest rates.

What happens if this is done? The problem with this measure is that interest rates are the main instrument of monetary policy available to central banks and impact the entire economy, not just the sector affected by the bubble. I

---

think it's important, therefore, that governments, central banks, and those responsible for financial stability policy develop alternative instruments that are more surgical, so to speak, more focused on the specific phenomenon we want to eliminate, and that don't affect the entire economy.

> **Key words:** financial crisis, macroeconomics, credit, bubble, interest rates, central bank

> **Video:** <http://youtu.be/jOgJKv8wrOw>



> **Key ideas:** <http://w.uoc.edu/speculative-bubbles>

“ ”

The difference between the market price and the intrinsic value is what we call the 'bubble component' or the 'speculative bubble' in a given asset, whether it's a financial or a real estate asset.





One might well ask why anyone would want to pay a price for an asset that's higher than its intrinsic value. The answer is that people, investors, are willing to pay this higher price to the extent that they believe it will be possible to resell the asset at an even higher price in the future. This is what economists call a “rational speculative bubble”, because a rational investor may be willing to buy, or to pay a price that includes a significant bubble component, even though the bubble in question is bound to burst sooner or later.



So how can we combat bubbles? This is a very complex issue. The first step is to place restrictions on the finance purchasing of the assets whose price includes a bubble component. [...] Even if we can't guarantee that a bubble won't develop and grow, by placing restrictions on when these situations arise we can at least avoid excessive growth of the financial sector and the resulting knock-on effect on the real economy.

---

**Fitó:** What effects have the crisis and, thus, the economic downturn and reduced taxation had in terms of fiscal policy?

**Gali:** The crisis is not fiscal in origin or related to an excess of fiscal disarray. Fiscal problems are a consequence of the crisis, caused mainly by the sharp decline in economic activity, which – as a result of shrinking tax bases and higher government spending – has led to a reduction in the tax revenue collected by governments.

There are two aspects or dimensions to the decrease in tax revenue, the increase in public spending, and the resulting deficits. One is what we call “automatic stabilizers”: the fact that without the government taking any deliberate decision, tax revenue falls as a consequence of the decline in economic activity and the resulting erosion of tax bases. At the same time, government spending, or some components of government spending, goes up. For example, spending

---

on unemployment benefits increases because of higher unemployment. Thus, automatically, without any decision having been taken or any change in legislation, tax revenue falls, government spending rises and the deficit grows.

The second factor that comes into play is what we call “discretionary fiscal policy”. This refers to deliberate decisions taken by governments, to cut tax rates to stimulate economic activity, for example, or to increase government spending – public investment or other types of spending – also with the aim of stimulating economic activity and mitigating the impact of the crisis.

There are ways to measure the extent to which the sharp increases in government deficits we’ve seen in recent years are attributable to one factor or the other. Overall, in the case of the most advanced countries, the impact of these two factors has been more or less 50-50. Automatic stabilizers and discretionary policy decisions have contributed in roughly equal measure to sharp increases in deficits.

Higher deficits lead almost immediately to the accumulation of debt. Debt ratios varied widely from one country to another at the outset of the crisis, but widespread government deficits have clearly led to a very significant increase in debt-to-GDP ratios in almost all advanced countries.

The fundamental problem with this is that there comes a point when the debt can enter into an explosive dynamic, a dynamic that’s not sustainable. This occurs when interest rates are very high, because with rates high, interest on the debt keeps accumulating very rapidly, increasing government spending and driving up the deficit. Things can also get out of hand when the growth rate is very low, because in this situation tax bases don’t grow. Moreover, when we measure a country’s indebtedness, we look at total debt in relation to GDP. To reduce this ratio, or stop it from increasing, the denominator needs to grow. This requires a significant growth rate, which hasn’t been achieved in recent years because of the crisis and the resulting economic stagnation.

In fact the denominator has been shrinking for many years now. It’s been necessary to adopt a contractionary fiscal policy to prevent excessive growth of debt that the markets may not have been able to absorb, or which would have triggered a dynamic that couldn’t be controlled. But in this case a contractionary fiscal policy is being pursued at a time of economic crisis. Obviously this is exactly the opposite of what the textbooks recommend. In this case, though, circumstances have forced the government to take this action. An effort is being made to proceed as gradually as possible, but clearly it’s had an impact on the public.

---

> **Key words:** macroeconomics, fiscal policy, public deficit, public spending, taxation, discretionary policy, contractionary policy

> **Video:** <http://youtu.be/f42b2XSGaK8>



> **Key ideas:** <http://w.uoc.edu/effects-of-crisis-on-fiscal-policy>

“ ”

Fiscal problems are a consequence of the crisis, caused mainly by the sharp decline in economic activity, which – as a result of shrinking tax bases and higher government spending – has led to a reduction in the tax revenue collected by governments.

“ ”

Higher deficits lead almost immediately to the accumulation of debt. Debt ratios varied widely from one country to another at the outset of the crisis, but widespread government deficits have clearly led to a very significant increase in debt-to-GDP ratios in almost all advanced countries. The fundamental problem with this is that there comes a point when the debt can enter into an explosive dynamic, a dynamic that's not sustainable.



**It's been necessary to adopt a contractionary fiscal policy to prevent excessive growth of debt that the markets may not have been able to absorb, or which would have triggered a dynamic that couldn't be controlled. [...] Obviously this is exactly the opposite of what the textbooks recommend.**

---

**Fitó:** Indeed, the GDP-to-debt ratio in many EU countries triggered what could be called “the European debt crisis”. How would you rate European policy in this area?

**Gali:** Perhaps we should start by defining what we mean by the debt crisis in Europe and what sets it apart from any straightforward, albeit substantial, increase in debt ratios.

What has happened in Europe – or more specifically in some peripheral EU countries – is that at a certain point investors lost confidence in the ability of the governments of these countries to repay all the debt they had accumulated. This loss of confidence makes it difficult for these countries to refinance their debt. Debt instruments are constantly maturing, and as the governments of these countries are not running surpluses, the only way they can repay this debt is to issue more debt to refinance it.

Given that debt ratios keep increasing exponentially without any clear prospects for economic recovery – and hence no reasonable expectation of future fiscal surpluses that would make it possible to pay down the debt – investors will think twice before purchasing debt issued by these countries. In practice, this means they demand interest rates much higher than they normally would.

Faced with this unsustainable situation and the risk that some or all of these countries could go bust, the European Union was forced to act. This action came in the form of financial assistance and macroeconomic adjustment programmes, first for Greece in 2010, later for Ireland (also in 2010), then Portugal, and so on.

At the time these measures seemed absolutely essential. Many believed that without them the whole euro project – the eurozone as a monetary union – would fall apart. We need to see these measures in perspective and consider whether, and to what extent, these bailouts respected the design of the EU,

---

its fiscal arrangements. Because these bailouts, or at least some of their constituent elements, clearly violated what were viewed as two pillars of the Treaty on the Functioning of the European Union.

The first pillar, contained in the Treaty, is the no-bailout clause, which states that in no circumstances shall EU member states or the EU as a whole be required to assume liability for a member state's debts and bail it out. The no-bailout clause was included in the Treaty precisely to prevent any country from taking advantage of the generosity of its partners by running an irresponsible fiscal policy in the knowledge that if things went sour they would be bailed out. The clause was supposed to ensure that countries would behave virtuously. But that's not what happened.

The second key element, part of the EU's monetary and fiscal architecture, was an explicit prohibition of government debt monetization (also stated in the Treaty). What does this mean? It means, in principle, that the central bank cannot finance the deficit of any member of the monetary union. Not even national central banks can finance deficits this way: deficits must be financed by issuing public debt, raising taxes, or cutting spending.

> **Key words:** macroeconomics, debt crisis, European Union, European Central Bank, no-bailout clause, public debt, European Treaty

> **Video:** <http://youtu.be/X-kmHjfOR2w>



> **Key ideas:** <http://w.uoc.edu/european-debt-crisis>



What has happened in Europe – or more specifically in some peripheral EU countries – is that at a certain point investors lost confidence in the ability of the governments of these countries to repay all the debt they had accumulated. This loss of confidence makes it difficult for these countries to refinance their debt.



Faced with this unsustainable situation and the risk that some or all of these countries could go bust, the European Union was forced to act. This action came in the form of financial assistance and macroeconomic adjustment programmes.



These bailouts, or at least some of their constituent elements, clearly violated what were viewed as two pillars of the Treaty on the Functioning of the European Union. The first pillar, contained in the Treaty, is the no-bailout clause, which states that in no circumstances shall EU member states or the EU as a whole be required to assume liability for a member state's debts and bail it out. [...] The second key element was an explicit prohibition of government debt monetization. What does this mean? It means, in principle, that the central bank cannot finance the deficit of any member of the monetary union.

---

**Fitó:** What are your thoughts on the monetary and regulatory policy during the crisis?

**Galí:** In normal circumstances monetary policy works through the changes central banks make to what we call “official interest rates”. These changes in official interest rates, which are usually the rates that apply to extremely short-

---

term loans the central bank extends to banks, end up affecting the economy as a whole, because the official rates are transmitted to rates charged on mortgages, on the loans banks provide to companies, etc. This is what we call the “transmission mechanism of monetary policy”.

What we’ve seen right from the outset in the current crisis is that the transmission mechanism of monetary policy has stopped working in various ways.

First, we saw that changes in official interest rates set by central banks weren’t necessarily reflected in other interest rates, for example in the interbank market, on the rates charged on the loans banks extend to one another. Why not? Because banks lacked confidence in the solvency of other banks because of a lack of sufficient information, etc. As a result, there was a period when rates on the interbank lending market – the rates that apply to loans between banks – were much higher than the official rate, when in normal circumstances they’d basically be the same.

Consequently, the financing cost for banks – the cost of covering their liabilities, of obtaining funds that would let them extend loans to companies and households – this cost increased, and obviously this had a knock-on effect on mortgage rates, etc. So the dramatic cuts in the interest rates determined by central banks were not sufficiently reflected in the rates that really affect companies and households. As a result, they didn’t generate as large an economic stimulus as would have been desired.

Moreover, we found ourselves in a situation without precedent in recent decades: inflation kept falling, unemployment rates were rising, and growth was negative. So central banks had every reason to cut interest rates. But there’s a limit on interest-rate policy, and it’s called “zero”. Interest rates can’t be reduced below zero. Why not? Because no one would be willing to provide a loan at a negative interest rate. The potential lender could always keep the funds in cash. Cash yields a zero interest rate, so it’s a better option than lending at a negative interest rate. Therefore, there’s a limit on nominal interest rates, a lower bound on nominal interest rates, and that limit is zero.

---

> **Key words:** macroeconomics, monetary policy, European Central Bank, central bank, zero lower bound, official interest rate, nominal interest rate

> **Video:** <http://youtu.be/JpXpRTRNHc0>



> **Key ideas:** <http://w.uoc.edu/monetary-policy-crisis>

“ ”

There was a period when rates on the interbank lending market – the rates that apply to loans between banks – were much higher than the official rate, when in normal circumstances they’d basically be the same.

“ ”

The dramatic cuts in the interest rates determined by central banks were not sufficiently reflected in the rates that really affect companies and households. As a result, they didn’t generate as large an economic stimulus as would have been desired.





We found ourselves in a situation without precedent in recent decades: inflation kept falling, unemployment rates were rising, and growth was negative. So central banks had every reason to cut interest rates. But there's a limit on interest-rate policy, and it's called "zero". Interest rates can't be reduced below zero.



During the crisis the European Central Bank has had to gradually relax quality requirements for assets used as collateral, to the point that now practically any asset that's not a junk asset can be used as collateral, even if it doesn't have very high ratings.



When central banks reach the lower bound on official interest rates – the zero rate – obviously they can't cut this rate any further, but they can use forward guidance to try to influence investor expectations about future interest rates.

---

**Fitó:** What can't central banks do when they reach zero-rate limit for nominal interest rates?

**Galí:** Before the crisis only high-quality assets could be used as collateral. Essentially this meant only triple-A assets. AAA assets have practically ceased to exist. As a result, during the crisis the European Central Bank has had to gradually relax quality requirements for assets used as collateral, to the point that now practically any asset that's not a junk asset can be used as collateral, even if it doesn't have very high ratings.

So this is the first unconventional monetary policy measure we've seen: this massive injection of liquidity. And then there's a second tool called forward guidance, which is perhaps not as easy to understand or describe, but it's

---

played a very important role and is bound to remain very important in the future.

The idea is this: when central banks reach the lower bound on official interest rates – the zero rate – obviously they can't cut this rate any further, but they can use forward guidance to try to influence investor expectations about future interest rates, the rates that will apply when we've got out of the zero-interest rate situation. They can exert an influence by trying to convince investors that they'll keep interest rates very low for much longer than the macroeconomic circumstances would justify.

Why would they want to do this? And why have they – especially the Federal Reserve, but also the European Central Bank in recent months – been doing this? Because to the extent that announcements of this kind are credible, they should lead to a reduction in long-term interest rates, which should be reflected – to the extent that the financial system is working at least minimally as it should – in the rates charged on loans provided by banks. So forward guidance was the second unconventional policy tool, and it's clearly unconventional because all central banks had to do was make announcements about measures that might be taken in the future, without taking any decision in the present.

However, forward guidance does allow central banks to try to influence investor expectations about future interest rates.

> **Key words:** macroeconomics, monetary policy, European Central Bank, central bank, zero lower bound, nominal interest rate

> **Video:** <http://youtu.be/OaEVOJVeYmQ>



> **Key ideas:** <http://w.uoc.edu/nominal-interest-rates>



Central banks [...] can exert an influence by trying to convince investors that they'll keep interest rates very low for much longer than the macroeconomic circumstances would justify.



This should lead to a reduction in long-term interest rates, which should be reflected – to the extent that the financial system is working at least minimally as it should – in the rates charged on loans provided by banks.



So forward guidance was the second unconventional policy tool, and it's clearly unconventional because all central banks had to do was make announcements about measures that might be taken in the future, without taking any decision in the present.

---

**Fitó:** Having seen fiscal and monetary policy during the crisis, to what degree is the current democratic system ready to respond to current macropolicy needs? And what role do the new macroprudential policies have to play?

**Galí:** Fiscal policy and monetary policy have traditionally been the two main branches of economic policy, or macroeconomic policy. Now, as a result of the crisis, it seems a third branch is emerging, and the question is whether this third branch, which we usually call “macroprudential policy”, is here to stay, even in normal circumstances, or is more or less a temporary thing, a tool to be used until the recovery is on a firm footing.

I think this kind of policy is here to stay, because now we really see the need – the recent crisis has made this abundantly clear – to carefully monitor threats to financial stability, and therefore the risk of financial instability, the risk of further

---

financial crises in the future. What we want to avoid at all costs is another financial crisis like the one we've just seen, the kind of crisis that spreads to the broader economy, leads to a fall in employment, economic activity, etc.

So what does macroprudential policy involve? It's important to distinguish this kind of policy from what we might call "microprudential policy", the type of policy traditionally used by regulators of the financial system. Microprudential policy involves examining each individual bank or financial institution to determine whether it meets basic requirements with respect to solvency, liquidity, etc. This approach focuses on each institution in isolation, without looking at it in the context of other institutions and the general macroeconomic conditions in a country.

Macroprudential policy doesn't question the value of microprudential policy, which must continue to play a role, but it does seek to go a step further. It's aimed at determining to what extent the activities of each financial institution – given the current macroeconomic circumstances, the behaviour of other financial institutions, and the connections that exist between them – to what extent these activities pose a potential risk to the financial stability of the country as a whole. Because a particular activity or policy pursued by a bank, in a context of very responsible, conservative behaviour on the part of other banks, and in the absence of any major macroeconomic or financial imbalances that affect the economy as a whole – the fact that an individual bank is pursuing slightly irresponsible policies should in principle lead to a micro-level intervention, by the authorities responsible for microprudential policy, but it shouldn't affect other banks.

The problem arises when the activity of many banks, each of which on its own wouldn't affect the system as a whole – when many banks engage in the same types of transactions: this endangers the entire financial system. This is what macroprudential policy should prevent.

The first step is to more closely monitor what we call "systemic risk", the extent to which the activities of various actors in the financial system put the system at risk – not each individual institution, but the system as a whole, which means it's particularly important to monitor large institutions very strictly. Another aspect of this approach is the use of what we call "macroprudential instruments", relatively new tools that have only been tried in a few countries and are still something of a work in progress – changes in capital ratios, for example.

---

> **Key words:** macroeconomics, macroprudential policy, microprudential policy, systemic risk, macroprudential instrument

> **Video:** <http://youtu.be/x9dn4HOEI7c>



> **Key ideas:** <http://w.uoc.edu/macprudential-policy>

“ ”

Now, as a result of the crisis, it seems a third branch is emerging, and the question is whether this third branch, which we usually call ‘macroprudential policy’, is here to stay, even in normal circumstances, or is more or less a temporary thing, a tool to be used until the recovery is on a firm footing. [...] I think this kind of policy is here to stay, because now we really see the need – the recent crisis has made this abundantly clear – to carefully monitor threats to financial stability.



**Macprudential policy doesn't question the value of microprudential policy, which must continue to play a role, but it does seek to go a step further. It's aimed at determining to what extent the activities of each financial institution – given the current macroeconomic circumstances, the behaviour of other financial institutions, and the connections that exist between them – to what extent these activities pose a potential risk to the financial stability of the country as a whole.**



**The problem arises when the activity of many banks, each of which on its own wouldn't affect the system as a whole – when many banks engage in the same types of transactions: this endangers the entire financial system. This is what macroprudential policy should prevent.**

---

**Fitó:** What role has the euro as a single currency played in the process of European integration? Have we reached a point where the process will be strengthened or, on the contrary, are we facing a clear risk of disintegration?

**Gali:** Before the crisis, I'd say there was a widespread perception that the euro, the process of European monetary integration, had been a success, a great success. It was seen as a success in terms of monetary policy, which was aimed at achieving price stability, with inflation around 2% or lower in the eurozone as a whole. This has clearly been achieved, despite the fact that many of the countries that are part of the eurozone and have been from the start have a history of high inflation. For the first time in decades, these countries, including Spain, have found themselves in a situation of great price stability. So, one great success. The introduction of the common currency in the form of physical notes and coins was also a success. I think citizens of eurozone countries are enormously grateful for this, though obviously there was a period of adaptation, which was a bit tougher for some people, those more used to the national currencies.

---

But as a result of the crisis, this rather idyllic view of the introduction of the euro has changed. We now realize that the eurozone is more than one economy: it's a group of very heterogeneous economies that don't necessarily behave the same way all the time.

As for the crisis, I think the European Central Bank has responded appropriately, though perhaps more slowly than it should have when it came to reducing interest rates, particularly in comparison to its counterparts in other countries. But overall I think the ECB has responded appropriately. The thing is, monetary policy has its limitations, and in this case it clearly has its limitations even in countries that have their own central bank and have seen that the interest rate can't be reduced below zero. This is a serious limitation, but in the case of the monetary union, there's an added difficulty: the need to respond to different problems in different countries.

In the past – even in the context of the European Monetary System, for example, when countries maintained fixed but adjustable exchange rates – the imbalances that built up in the pre-crisis years had a relatively easy solution: devaluation. A country that had an inflation rate above the average for its neighbours and was accumulating very large current account deficits could regain its competitiveness, literally from one day to the next, by devaluing its currency.

In the current context, such measures have a limited effect, if any. Why? In normal circumstances, when a country has a central bank and monetary policy can operate normally, a reduction in wages, for example, or a cost reduction achieved by boosting productivity would eventually result in lower inflation, which would lead the central bank to respond by cutting interest rates. The cut in interest rates by the central bank in response to lower costs and lower inflation would then stimulate aggregate demand, boosting production and employment.

But in the current circumstances this kind of central bank response is absent. First, because the countries in the periphery of the eurozone no longer have their own central banks, and the European Central Bank will never respond to developments in individual countries. In fact, it can't because it has no specific instrument for dealing with problems in a particular country.

Furthermore, even if these countries had their own central banks, as the United States does, their hands would be tied: interest rates cannot be cut any further. In other words, monetary accommodation in response to lower costs is no longer possible. So it seems the only option left is supply-side measures of the kind constantly being advocated by international organizations like the IMF. They're worth a try. No doubt they'll eventually have an impact. They have

---

some desirable effects, but we shouldn't expect them to rapidly deliver a strong economic recovery.

> **Key words:** macroeconomics, euro, European Central Bank, interest rate, devaluation, European integration

> **Video:** <http://youtu.be/eDAVj2K44YA>



> **Key ideas:** <http://w.uoc.edu/european-monetary-integration-process>

“ ”

Before the crisis, I'd say there was a widespread perception that the euro, the process of European monetary integration, had been a success, a great success. [...] But as a result of the crisis, this rather idyllic view of the introduction of the euro has changed. We now realize that the eurozone is more than one economy: it's a group of very heterogeneous economies that don't necessarily behave the same way all the time.

“ ”

In the past – even in the context of the European Monetary System, for example, when countries maintained fixed but adjustable exchange rates – the imbalances that built up in the pre-crisis years had a relatively easy solution: devaluation.





**In the past – even in the context of the European Monetary System, for example, when countries maintained fixed but adjustable exchange rates – the imbalances that built up in the pre-crisis years had a relatively easy solution: devaluation.**



**In normal circumstances, when a country has a central bank and monetary policy can operate normally, a reduction in wages, for example, or a cost reduction achieved by boosting productivity would eventually result in lower inflation, which would lead the central bank to respond by cutting interest rates. [...] But in the current circumstances this kind of central bank response is absent. First, because the countries in the periphery of the eurozone no longer have their own central banks, and the European Central Bank will never respond to developments in individual countries. [...] Second, even if these countries had their own central banks, as the United States does, their hands would be tied: interest rates cannot be cut any further.**

---

**Fitó:** This financial crisis will mark a turning point not only for the economy, but for the scientific community too. How has the framework for studying the economy been affected?

**Gali:** Clearly the economic and financial crisis of recent years has had a huge impact on economics research. In a sense, we can see what's happened as a race between unfolding events and researchers' efforts to modify and adjust their models in ways that allow them to account for the phenomena we've seen, which have been central in the economy.

Before the crisis, a particular type of model, commonly known as the New Keynesian model, was widely adopted. This dynamic stochastic general equilibrium model emphasizes nominal rigidities – the fact that wages and prices adjust gradually – which means that monetary policy is non-neutral and can be used to improve resource allocation.

---

Models of this kind, developed roughly over the last decade, were at the heart of macroeconomic models used by central banks and international organizations, including the IMF and the World Bank, to simulate the effects of different policies.

The problem is that these models – and this may seem odd, even surprising, from our current perspective – completely ignored the existence of a financial system. In other words, the models are constructed in such a way that financial transactions never take place. As a result, these models can obviously never generate a financial crisis. They can't predict a financial crisis, and they aren't particularly useful when it comes to simulating a financial crisis or working out how to respond to a situation of this kind, in which the frictions or imperfections of the financial system are critically important. This financial system just wasn't part of these models.

So how has the economics profession responded to recent developments? Economists have responded as we might expect them to: by working to incorporate financial frictions in models of this type while maintaining some of their widely recognized virtues. The first step in adapting the models is to explicitly introduce a financial system, then a particular type of imperfections within the financial system, and potentially the macroprudential policy tools I discussed before, so the effects of changes in the way these instruments are used can be analysed and assessed.

The greatest challenge in developing this new generation of models is to create models in which the financial frictions introduced are capable of generating a financial crisis by themselves, models in which a financial crisis can develop as a result of imbalances that accumulate over time and don't become sustainable, leading eventually to a collapse of the financial system.

This is very difficult to incorporate in these models because it requires different techniques. Conventional models were usually linear and shocks had symmetrical effects, whereas the introduction of these phenomena, or any attempt to capture them, clearly requires linear models that can have multiple equilibria. This makes it much more difficult, first to develop these models, and second to reach a consensus on what the standard model should be. At this point I can assure you that we're far from reaching a consensus on what model should replace the New Keynesian model – the consensus model before the crisis, adopted by all central banks and international organizations – or how the existing model should be modified.

---

> **Key words:** macroeconomics, New Keynesian model, financial system, economics, scientific community

> **Video:** <http://youtu.be/e9I00dMVjbo>



> **Key ideas:** <http://w.uoc.edu/framework-for-studying-economy>

“ ”

Before the crisis, a particular type of model, commonly known as the New Keynesian model, was widely adopted. This dynamic stochastic general equilibrium model emphasizes nominal rigidities – the fact that wages and prices adjust gradually – which means that monetary policy is non-neutral and can be used to improve resource allocation.

“ ”

These models – and this may seem odd, even surprising, from our current perspective – completely ignored the existence of a financial system. In other words, the models are constructed in such a way that financial transactions never take place. As a result, these models can obviously never generate a financial crisis. They can't predict a financial crisis.

---

“ ”

How has the economics profession responded to recent developments? Economists have responded as we might expect them to: by working to incorporate financial frictions in models of this type while maintaining some of their widely recognized virtues.

“ ”

The greatest challenge in developing this new generation of models is to create models in which the financial frictions introduced are capable of generating a financial crisis by themselves.

“ ”

At this point I can assure you that we're far from reaching a consensus on what model should replace the New Keynesian model – the consensus model before the crisis, adopted by all central banks and international organizations – or how the existing model should be modified.



## Jordi Galí

Galí has a doctorate from the Massachusetts Institute of Technology (MIT) and has taught at Columbia University and New York University. He is considered one of the leading experts in New Keynesian macroeconomics.

He is currently Director of the Centre de Recerca en Economia Internacional (CREI) and was included on the list of the world's ten most-cited economists between 1997 and 2007 by Essential Science Indicators.

> Jordi Galí's CV on the CREI website:  
<http://www.crei.cat/people/gali>



## Àngels Fitó

Dean of the UOC's Economics and Business Studies Department

Fitó has a doctorate in Economics and Business Sciences from the University of Barcelona. She has specialized in fiscal, financial and accounting management, subjects that she has taught at a number of universities.

Between 1995 and 2009, she combined her teaching with a professional career in the field of financial and accounting consultancy for small and medium-sized enterprises.

> Àngels Fitó's CV on the UOC website:  
<http://www.uoc.edu/webs/afitob/CA/curriculum/index.html>

---

# Index

- bank panic, 11
- bubble, 8, 9, 12, 13, 14, 15
  
- central bank, 11, 13, 14, 19, 20, 21, 22, 23, 24, 25, 29, 31, 32
- contractionary policy, 17
- Crash of 1929, 10, 11, 12
- credit, 5, 8, 9, 10, 11, 13, 14, 15
  
- debt crisis, 18, 19
- deposit guarantee fund, 11
- devaluation, 29, 30, 31
- discretionary policy, 16, 17
  
- economics, 31, 32, 33, 34
- euro, 18, 28, 29, 30
- European Central Bank, 5, 19, 22, 23, 24, 29, 30, 31
- European integration, 28, 30
- European Treaty, 19
- European Union, 18, 19, 20
  
- financial crisis, 5, 8, 9, 11, 14, 26, 31, 32, 33, 34
- financial system, 10, 13, 24, 25, 26, 28, 32, 33
  
- housing, 5, 8, 9, 11, 13
  
- interest rate, 13, 14, 16, 18, 21, 22, 23, 24, 25, 29, 30, 31
  
- macroeconomics, 4, 9, 11, 14, 17, 19, 22, 24, 27, 30, 33, 35
- macroprudential instrument, 27
- macroprudential policy, 25, 26, 27, 28, 32
- microprudential policy, 26, 27, 28
- monetary policy, 13, 20, 21, 22, 23, 24, 25, 28, 29, 31, 33
  
- New Keynesian model, 5, 31, 32, 33, 34
- no-bailout clause, 19, 20
- nominal interest rate, 21, 22, 23, 24
  
- official interest rate, 22, 23
  
- public debt, 19
- public deficit, 17
- public spending, 15, 17
  
- scientific community, 31, 33
- systemic risk, 26, 27
  
- taxation, 15, 17
  
- zero lower bound, 22, 24

---

## Recommended citation

GALÍ, Jordi (2014). "Lessons we have learned from the crisis. A dialogue with Jordi Galí." In: *Inaugural lecture for the academic year 2014/2015* [online]. UOC. [Accessed: dd/mm/yy]. <http://w.uoc.edu/inaugural14/>



This text is subject – unless otherwise stated – to the Creative Commons Attribution 3.0 Spain licence. It may be copied, distributed, communicated publicly, transmitted and adapted, providing that the author of the text and the institution publishing it (UOC) are mentioned. The full licence can be consulted at <http://creativecommons.org/licenses/by/3.0/es/deed.en>.

## Credits

**Published by:** Office of Communications. Digital Communications. **Director of Communications:** Lluís Rius. **Director of Digital Communications:** Yolanda Franco. **Editorial Coordination:** Maria Boixadera. **Correction and Translation:** UOC Language Service. **Images and Photographs:** David Campos. **Graphic Design Coordination:** Xènia Bastida. **Design:** Petit Comitè. **Layout:** Grafime. **Production Coordination:** Joan Teixidó. **Printed by:** Fermay Servicios Gráficos. **Legal Deposit:** B 6672-2015. **Postal Address:** Universitat Oberta de Catalunya, Av. Tibidabo 39-43, 08035, Barcelona. **Web of the inaugural lecture:** [w.uoc.edu/inaugural14](http://w.uoc.edu/inaugural14). **Hashtag on Twitter:** #UOCinaugural.

---

**Headquarters (Rectorate)**

Avinguda del Tibidabo, 39-43  
08035 Barcelona  
Tel.: 93 253 23 00

**Barcelona**

Rambla del Poblenou, 156  
08018 Barcelona  
Tel.: 93 481 72 72

**Madrid**

Plaza de las Cortes, 4  
28014 Madrid  
Tel.: 91 524 70 00

**México D.F.**

Paseo de la Reforma, 265, piso 1  
Col. Cuauhtémoc  
06500 México D.F.  
Tel.: + 52 (55) 55 114206 al 08

---

[uoc.edu](http://uoc.edu)

[@UOCuniversity](https://twitter.com/UOCuniversity)

[facebook.com/UOC.universitat](https://facebook.com/UOC.universitat)