THE SUB PRIME CRISIS

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Part 1

Thank you everyone, I guess the question is whether you'll still all be clapping at the end of the lecture really. I am actually from the Economics Department and I hope that some of you at least will be doing Economics as your degree. One of the things that we tend to try and do in Economics or in the Economic Courses which we teach here is to try to give our courses quite a strong policy focus and I am going to talk about what is the big policy issue of today which is essentially the credit crunch, the sub prime crisis or whatever and all of these things. And housing actually is central to what is going on in the sub prime crisis at the moment, the credit crunch. That is why I gave you a couple of background articles to read on the subject of housing economics. So I am not going to refer to those articles directly but they are, sort of, background to what I am going to talk about. OK, so say we are going to talk about perhaps the biggest issue in economics today in terms of policy concerns. Any of you who have listened to the radio in the U.K. today and yesterday, and in fact most of this week will have been hearing about the latest profits, or lack of profits produced by the banking system at the current time. These are a direct fall out from what's been going on in terms of, well, the banking crisis over the course of the last couple of years or so.

I am going to start you off with a little bit of data. Essentially given that we are talking about housing and the role of this in the current financial crisis, the first bit of data which people usually look at is the course of house prices. Right away around the world, house prices and the course of house prices over the last 10 years or so have been a big policy issue. Also because the majority of peoples' wealth tends to be held in the form of housing even individuals as well as policy makers are interested in what has happened to house prices. On this graph up here I have essentially put the change in house prices in the United Kingdom and the United States going back from the mid 1970's until just about the current time. Two things I want to point out. The blue line on here is the United Kingdom and the reddish line is the United States. Americans always get very agitated by the fact that housing markets in the United States are typically very volatile. So the house prices go up and down over the course of time and show strong cycles. Well in fact if you plot the course of United States housing cycles against the United Kingdom you put them on the same graph. In fact the U.S. cycles almost disappear off the scale. Housing cycles in the United Kingdom are much, much more dramatic than has been observed in the United States. That has always been the case going back to the 1960's or so. So you can see from this graph that the blue line is much more volatile than the red line for the United States.

Now the second thing I want to point out is what's happened over the course of the last couple years ago. This is when the crisis started to hit the market. And that's that little bit part of the graph down there. And what you can see from there is that the house prices in both of the United States and the United Kingdom have fallen very sharply over the course of the last couple of years. In fact the biggest collapse or decline of house prices that we've probably experienced over the course of last fifty years or so in those two countries. And those fallout collapses followed on from periods of strong growth in prices. So in fact more or less from about the mid 1990's up until about two years ago house prices have been simply going up and up and up over time. So if you are actually investing in housing ten years ago, and holding a house, you would have made a very strong profit from investing in housing. And part of the problem was that many people had got into the mind set that the prices would be going to continue to go up and up and hence people were piled into investing in housing more and more in big ways in the expectation that they would make greater and greater profit on these things. Of course, when the collapse came there were major consequences both for individuals and for the world economy as a whole.

Part 2

I am not going to worry about all these graphs, we haven't got time to go through them all. But the other one I want to concentrate on is this one here. And this one is a measure for the United Kingdom of how much lending mortgage providers have actually carried out, in, well of course again from 1970 onwards. So it's a basically the volume of mortgage advances provided by the main mortgage lenders in the United Kingdom. And again two features stand up. Really more or less of the whole period from 1970 up until a couple years ago it has gone up and up and up. Mortgage provides have been very good at providing funds for mortgage for the finance of mortgage purchases. But most of us who want to buy a house we haven't got sufficient funds simply to put money down to buy the house. We have to wander along to a mortgage provider and say 'Can we have a mortgage which we use to finance the purchase of our house?' That's essentially what that graph shows. But again what you can see, in the last couple of years the volume of mortgages, the amount of mortgages advances which we get from mortgage providers has absolutely collapsed over that period. That's the biggest decline we have ever experienced over that period.

And since as I say we need mortgages to be able to finance the purchase of our house, if the lenders are no longer willing to provide those funds, it's going to have very strong knock-on effects into our ability to purchase homes. So it's not terribly surprising there's a strong correlation between that collapse in mortgage lending and the fall in house prices which we've been experiencing for the past couple of years. But this collapse in mortgage lending is essentially what is known as the credit crunch. It is basically a shortage of funds provided to households and to firms to support their business or purchase, in this case of housing.

A couple of other little bits of data I want to show you. This one over here is what we call in Economics 'The Savings Ratio' and those of you doing Economics will find that theories, of what we call consumer behaviour, pay great attention to what is called The Savings Ratio. Essentially what a savings ratio is, is the proportion of our incomes that we all save out of our, rather than consuming in any period. For example, if I have an income of £100 a week, whatever it is, and I spend £90 of that, I therefore save £10 and my savings ratio would be 10%. It would be the proportion of my income which I am actually saving in any time period. We can look at that from the concept of the economy as a whole.

The thing which I want to point out here is, again, what's gone on in recent years. It's collapsed, OK, so people have been very bad at actually saving any part of their income in recent years. In fact, in a certain part of the period it actually went negative. We actually spent, in aggregate, sorry we consumed more than we actually earned, so our savings have been negative. That is the first time that has happened since the 1950's.

Why does this matter? Well essentially it matters in this context because of what we actually do with these savings. So normally for an individual household we would either put them in banks, we would put them into other savings institutions, we might hold stocks and shares, whatever. So essentially if we are not saving, we are actually consuming more than we actually earn, it basically affects the amount of money which banks and other mortgage providers can use for providing mortgage loans.

The final one I want to point out is this one here. This is a graph of interest rates in the UK economy. A slightly difficult one. Essentially two lines, if we look at the blue one. This is the difference between what we call the bank base interest rate, and this is essentially the interest rate which is set by the Bank of England each month. So the Bank of England announces what the base rate of interest is going to be for the economy as a whole. As the name suggests it provides a sort of an anchor, if you like, for other interest rates in the economy.

And that's the difference, this line here, the blue line, is the difference between the bank interest rate and the mortgage interest rate. The mortgage interest rate is essentially the interest rate which banks charge on loans they provide to individual households for purchases of homes. So it refers to that sort of advances, grant which we had before. The important thing here is you can see in the last couple of years or so that that gap has widened really quite sharply. What essentially has been going on there is that the Bank of England has really cut very sharply its base rate. So in a calm period for example the bank base rate is a half of a percentage point in the United Kingdom. And that's the sort of lowest level of interest rate for the economy as whole we've had since about the seventeenth century. So it's a record low interest rate in terms of the interest rate set by the Bank of England at the current time. The trouble is that mortgage rates, the interest rate which is charged by banks for mortgages, hasn't fallen in line with that cut in bank base rates. Essentially, the mortgage providers have actually kept their interest rates relatively high, they've increased their margins if you like, to take a look at those things. So despite the fact that the Bank of England have cut their interest rates, ordinary consumers, ordinary household haven't fully benefited from that in terms of falls in interest rates being passed on in terms of their mortgages.

Part 3

Now, that provides us with a little bit of background to what we want to talk about. So as I said, essentially what the credit crunch is, is basically, a lack of lending or the inability of banks and other financial institutions to provide loans to either firms or to households for the purchases of goods, whatever it is. So here we're particularly concentrating on housing so the credit crunch means that there are insufficient funds available to individuals to purchase their house. I you want a loan, if you want to buy a house, you wander along to a bank and ask for a mortgage till, probably still the case, that most banks will probably say no unless you are in a particularly strong position at the moment. And it's also the case that many, particularly small firms, are arguing that they are having problems accessing sufficient finance from the banks to support their own activities, so it's having knock-on effects into firms as well. So the credit crunch basically refers to a lack of lending to both household and to firms, but we're concentrating primarily on the household sector. And why does it matter? well basically because if this happens it reduces aggregate demand in the economy, ok, and that's something we're looking at in detail if you're doing Economics Courses. And what I mean by that is things like business investment falls, housing investment falls, consumer's expenditure falls. All of these things will be affected by the inability to obtain sufficient funds under the credit crunch.

OK. Now a little bit of economics, a bit more formal economics; what I want to sort of stress in terms of this little flow diagram, which basically comes from The Bank of England publication, is - basically shows what we sometimes call the transmission mechanism of monetary policy in the economy, transmission mechanism. And essentially over on the left hand side we have got the official interest rate, now that's what I call the base or the bank rate, or the base rate before. That's the policy instrument on which the Bank of England acts, if it actually wants to try to control wider interest rates in the economy. So you can see it from here, the bank changes the official rates it affects other market rates, - and among those other market rates which we would normally expect to be affected would be the mortgage rates - the mortgage interest rates. But we saw from a previous diagram that essentially, that traditional root whereby official rates affects mortgage rates hasn't happened very closely in the course of the last two years or so.

But it affects other things as well, I'm not going to concentrate in all these things, but one which we will mention, asset prices, basically what we mean by that, we mean the prices of financial assets such as stocks and shares, they are sort of related to levels of interest rates in the economy. But we also mean physical assets as well, and the biggest one of these is, by far, is housing. So essentially what we'd expect to happen is if there is a change in the official rate, let's say The Bank of England reduces interest rates in the economy, we'd expect that to have, by itself, a positive effect on house prices, because the demand for housing should go up when interest rates fall. That's what we would normally expect, but remember I said that recent cuts in interest rates by The Bank of England haven't been passed on to mortgage rates so house prices wouldn't be affected in quite same way.

If you take the next level, if we change interest rates, it affects what we call domestic demand –we won't worry about that one. Domestic demand, as I mentioned includes things like consumer's expenditure, includes investment, it includes expenditure on housing. So, if interest rates were falling through here, other things equal we would expect domestic demand to start to rise. Now, that is essentially what The Bank of England is trying to be able to do over the course of the last couple of years, since the credit crunch started to take effect, essentially we know that demand, in the economy has fallen very sharply, so one of the policy concepts or responses by the Bank of England has been to reduce interest rates. And what it hopes to do by that it is to stimulate, domestic demand. Lower interest rates, we hope consumer's expenditure, housing, business investment, etc, would all start to rise again, which will support the economy.

Part 4

But one of the problems has been that, because of the credit crunch there's been another effect operating on the economy in addition to the interest rate effect, i.e. the inability to obtain funds either for business investment purposes or for housing purposes. So there are two offsetting effects if you like: lower interest rates which are stimulating the domestic demand, we hope. But the credit crunch because of the inability to obtain funds actually reduces demand back down again. And that's basically what has been happening, that's been why we are going into, well we have been in a recession for some time, because of that inability to raise funds despite the low levels of interest rates, domestic demand has been very low. So in the United Kingdom at the moment, GDP or domestic demands falling by something round about 4 or 5 % a year, which is one of the strongest recessions which we've had for many, many years.

Now there is a slight offset to that because if we take over to here, if demand is low, what we'd expect to happen from that is it reduces inflationary pressures in the economy. So if demand is low relative to supplying the economy, standard demand of supply analysis will tell us that prices should start to fall in the economy. And that's exactly what we have had. Now on some measures of inflation in the economy over the last six months of so, prices have actually been falling in the economy and it's a reflection of the fact that domestic demand has been very weak, putting downward pressure on prices.

Now, normally we think that low rates of inflation are good things for the economy, that's what The Bank of England tries to achieve through its monetary policy, it tries to keep inflation low. But you can go too far from that. Negative inflation, i.e. when inflation is actually falling, is actually just as bad as having too strong inflation. And the reason is that if prices are falling, you notice that prices are falling in the shops, what are you going to do? Well, most of us would say OK if I think that next week the price of a particular good is going to be lower, because inflation is falling, I'm going to wait 'till next week to buy that good until the price has fallen. And there's evidence for that to happen, but if that happens, it means that demand is going to be even lower that it would otherwise had been the case. So you set up some sort of vicious circle in these things that, again, that lower demand would push prices down even further, so the point being is The Bank of England and the government doesn't actually like negative inflation just as much as it doesn't like the more traditional problem of positive inflation.

Right, let's, with that background, and bit of economics thrown in here - let's sort of start to talk about how the credit crunch crisis actually rose and what's the relation of this to the sub-prime mortgage problem. OK, now this originally was very much a United States problem. And one of the things that we have to explain is why that problem, which was primarily US based, should have such strong effects across the rest of the world. Why was it transmitted across the rest of the world? We have to go back to a little bit of basics to see this.

Well firstly, what is a sub-prime loan? The sub-prime loan is essentially the granting of, usually, a mortgage, to households who have a rather bad credit history. So, if you have a very bad credit rating and you wander along and ask your bank for a loan, the chances are that you won't get that loan. So a sub-prime loan is a sort of complimentary market for credit which specialises in providing loans to people who have impaired credit histories. Normally under most conditions you would expect to pay a higher interest rate on your mortgage if you went to that market than you would from the traditional market simply because you are a higher risk than a standard borrower.

Part 5

So – what went on? How did this occur? And what was the impact for the world economy? Well initially when the sub-prime market started to expand in the United States there weren't too many problems and there won't normally be too many problems while house prices are rising. We saw from just about the first graph the house prices in the United States were rising pretty well continuously from about 1996 till about 2005. So while those prices were going up then no great problems, and why wasn't there a problem? Essentially, supposing you have a sub-prime borrower someone with perhaps a not very stable income or whatever and supposing they suddenly find that they can't repay the loan, the mortgage loan. What are they going to do in those circumstances? Well essentially one thing they can do is simply to sell the house. They can go back into rental accommodation whatever it is. But they will still have gained because they will have made a capital gain whilst house prices are rising over the period in which they have lived in that house. So that's fine, no great problems for the lenders. If anyone runs into trouble they can afford to repay their loan by moving out whatever, there is no particular problems for the markets, typically won't default.

That's fine, now why did the sub-prime market actually start to expand so dramatically? Well really there were two events in the United States that were particularly important. The first one, there are some arguments about whether it is significant or not, but we will mention it. There is something called the US Community Reinvestment Act which has had various phases to it. But the basic idea of this was really quite a nice idea, it had very good social objectives but it ran into some serious problems. What it was trying to do, was to try to extend mortgage lending to, let's say people on average incomes and slightly below average incomes. It was trying to extend home ownership to groups who were perhaps not the sort of, the typical people which actually took out or bought houses in the United States.

And there were good reasons why they would want to do that from policy purposes. For example the evidence suggests that the home owners, for example tend to be better citizens in the neighbourhood and all of these sorts of things. So there are good reasons why the US government might have wanted to try to extend home ownership if they possibly could. Essentially the community reinvestment act was an attempt to try to force the mortgage lenders in the United States to extend their lending to groups who traditionally would not have obtained mortgages, who would not have been home owners. The trouble is of course as you extend lending further down the income scale, you're taking on riskier and riskier households, either households who are more likely to default on those loans in due course. So that was one thing, which was going on, a policy perspective.

This is actually what homeownership in the US looks like. You could see - this one goes back to 1890. You could see there is a very strong increase in home ownership after the Second World War but it levelled out somewhat, and then it sort of started to rise again, very recently started to fall again under the consequences of the credit crunch.

Now the second reason why the sub-prime market started to expand was essentially because of the low yields in the United States on conventional securities. This is a deliberate policy in the United States to try to keep basically a booming US economy particularly after the dot com bubble actually burst. So a particular policy of the US Federal Reserve after that period, and for most of recent years have been to try to keep interest rates on long-term government bonds really quite low. Which is fine, it's good for borrowers. The trouble is if you are an investor, it means that the yield that you are going to get on your return on conventional financial instruments, is also going to be low. So you are more likely to be looking for alternative investment which will give you a higher return. One of those alternatives is essentially the sub-prime market. You remember what I said that if you are lending to people lower down the income scale, the risk is higher but correspondingly the return which you get, or you expect to get on that investment, is going to be correspondingly high. So sub-prime lending became more attractive to investors in recent years when the yields on conventional securities was actually quite low. So in this little graph of it, you can see how the yield on long term government bonds in the United States has fallen.

Part 6

Right. OK so what happened? Why did the market collapse? Well, this is still controversial. A prior question in some sense is why did the housing market in the United States, the UK, many places round the world, in fact, most countries in the world. Why did they expand so continuously, from the mid 1990's onwards until a couple of years ago. And two basic sets of explanations are being put forward. One view which is put forward is essentially that there was a bubble. Basically a bubble means that prices are rising at a rate which is inconsistent with the sort of underlining economic principles or fundamentals, and it's generated by, things like expectations, herd behaviour and all these sorts of things. And one of the things which you always hear in the press in this country, most countries, is that what we've been experiencing recent years is a bursting of the house price bubble. There is very little evidence that that's true. It's a sort of media shorthand and commentary, for not doing proper economic analysis.

The second explanation is essentially that prices rose because of fundamentals. And what we mean by fundamentals is strong increases in household incomes over time, low levels of interest rates, shortages of housing supply. All of these sorts of things which also are very important in terms of driving house prices. So I won't try to take a view about which is the right explanation. I will just point out that there are differing views about what caused the increase in prices over time.

Now as a result of that increase in prices and from what I said about the attractiveness of the returns to investors on sub-prime loans in the United States the number of sub-prime loans quadrupled between 2001 and 2006. There was a massive increase in loans of sub-prime loans over that period. The trouble is of course, the more you extend these loans out eventually you are going to be granting loans to people who are poorer and poorer credit risks. The more you give of these things the greater the chances are that essentially you will be lending to people who have a very high probability of defaulting on those loans.

And there are good sort of institutional reasons why default was more likely to occur. One of the things which went on in terms of sub-prime lending was that, contrary to what you might expect, rather than having higher interest rates on these loans than conventional mortgages, at least initially many of these things actually had lower interest rates than traditional mortgages. And these were known as 'teaser' interest rates but they were essentially fixed for a short period of time perhaps two years or something like that. So if you were a sub-prime mortgager, you know, you have an impaired credit history, relatively low income, relatively low incomes, being offered a sub-prime loan at an initially very low interest rate, particularly when house prices are rising in the economy, seemed like a very attractive option, you know, why wouldn't you want to do it? You want to get on to the housing market as soon as possible; you've being offered a good deal, why wouldn't you want to do it? Well, one of the problems is that these teaser rates only lasted a certain period of time. And after this couple of years or whatever is then basically the interest rate reverted to essentially the standard mortgage interest rate with a risk premium on top of those, so that they are actually higher than conventional mortgages. So that after this period, these relatively low income households with heavy risks suddenly experienced the hike in the interest rate which they were paying on their loans and consequently they were pretty likely to default on those loans.

Other things that were going on, the credit checks on these things were appallingly badly, badly done. You're encouraged to overstate your income, there were not proper checks on these sorts of things. Lots of just straight fraud went on as well. And essentially, as I say, this is fine while prices are rising and interest rates are low but the problems started when the interest rate started to rise and the house prices started to fall. And in particular, people that took out these sub-prime loans in 2006 were particularly likely to default on these loans, because this was in the period where interest rates were starting to rise and the housing market was starting to collapse anyway. So there were very high levels of default on people particularly taking out the sub-prime loans in 2006. But that induces a self reinforcing process, the more people default, the more that pushes prices down and the housing market gets into a worse and worse state.

Part 7

Now, that's OK for the United States but why did it affect the rest of the world, why did UK banks get into such a mess as a result of what was going on? Well, the reason is through a process which is known as securitisation. Unfortunately we haven't got time to sort of talk in great deal of detail about securitisation. It's a difficult issue by I'll just give you a flavour of essentially what is going on.

Now, the basic point is that in the United States for various historical reasons if you go along to a US bank and you ask for a mortgage, the US bank won't keep that loan on its own books, it won't be a part of its own balance sheet. What it essentially does is to sell that loan along with other people's loans along to some other intermediary. The best known intermediaries of these things are what is known as Freddy Mac and Fanny May, which we won't go into. Essentially, what happens to these things is that these loans get bundled up and sold on in a form of security known as residential mortgage bank securities. And these residential mortgage bank securities essentially can be traded on international markets. Now in the United States this made an awful lot of sense, because essentially what happens by this route is that it increases the underlying liquidity of the financial system. So if the original bank sells them on to some second party, they can then create more mortgages and so on and so forth, so it increases the liquidity in the system.

But the key point about residential mortgage bank securities is that they are international tradable and the UK bought, well some UK banks bought an awful lot of these U.S. residential mortgage bank securities. Now again this is fine while the prices of houses are actually rising because essentially the price of mortgage bank security will be based upon what's actually happening to the underlying housing value. But as soon as house prices started to fall in the United States the value of these residential mortgage bank securities also fell. Because UK banks were not only, well sorry not only just U.S. banks were holding these things but also banks worldwide including the United Kingdom holding these things, then the whole of the international financial systems are affected by these things. One of the problems was initially – is that no-one really knew what was the exposure of, for example, the UK banks to the US residential mortgage bank securities market, and that causes problems.

Supposing you are, let's say, a UK financial institution and you are considering lending to another UK bank through the wholesale money market. Let's say that other institution is the Northern Rock to take a topical example. You don't necessarily know what the state of the balance sheet of the Northern Rock actually is. You don't know the exposure initially of the Northern Rock to residential mortgage bank securities. That makes the Northern Rock a risky proposition and you are much less likely to be willing to lend to that institution than you would otherwise be. Well that generalises. It wasn't just the Northern Rock that was caught up in this but the whole of the UK financial system. No-one actually knew the extent to which UK banks were exposed to the residential mortgage bank securities markets in the US. So what's going to happen under that situation? Well essentially no-one is going to lend to anyone else. The whole system seizes up through what's known as the wholesale money market. No banks are prepared to lend to each other. Essentially that is what the credit crunch actually was. It is a failure of each of the institutions to lend to each other.

Now one solution after that might be to say OK rather than financing mortgages or other business investment proposals through wholesale money markets, through banks lending to each other but we could do it through retail markets. Retail markets are essentially the funds that you and I put into banks and building societies on our deposit accounts. OK, obviously the banks can then lend those out to firms in principle or to mortgages or lending to firms. The trouble is, I showed you a graph a little bit earlier that the savings ratio for households had actually collapsed as well. So there was a shortage of funds coming through that route, what is known as the retail route as well, so the banks were facing the inability to raise funds both through wholesale market through lending amongst themselves but they also were not getting retail funds coming in through, through households as well. So if they are not getting the funds coming in, they couldn't lend out to households in terms of mortgages and they couldn't lend to firms in terms of business opportunities, essentially that's what went on.

Part 8

Now, I mentioned that no one really knew the extent of exposure of different UK banks to this problem, to holding these things. Now, in practice, it wasn't just United States banks who securitised their mortgages. Historically, they were by far, still is the case, that the US securitised mortgage market is far larger than any of the other ones. But the UK started to get into this securitised mortgage market in the sort of the early part of this century and since that time, as we'll see in a minute, it has risen really quite dramatically. But this is, don't worry too much about the numbers, but this is a list or a ranking of UK banks in terms of their use of securitisation to finance their activities. In other words, how much the U.S. household markets rather than relying on retail markets to attract funds.

And by far the one at the top of the league is the Northern Rock and that was the one which was in the news yesterday, which announced, well as you will see - essentially what happened, because of the problems it ran into it, it was nationalised by the British Government. And it's still making very large losses on its mortgages, which was announced yesterday. OK, so that was one which was particularly exposed to behaviour of what was going on in terms of international credit markets. Next one down, Bradford & Bingley, I'll come back to these in a minute, next one, HBOS, next one Alliance & Leicester. Then you can see there is actually quite a big gap in terms of exposure of the rest to international financial markets.

And Barclays, you might have noticed, actually announced a very big profit on Monday because of its activities. So by and large, those banks which were not heavily exposed to wholesale money markets and these things have faired better than those institutions which were heavily exposed to residential mortgage bank securities and Northern Rock being the classic example, but just bear in mind the other ones.

Now, I mentioned that British banks didn't really get involved in this residential mortgage bank securities market until fairly recently and this graph shows that. So essentially the amounts of these things were very, very low until the early part of this decade, then you can see it took off to reach a peak in about 2006. But essentially, since that period because of the credit crunch these issues of these things by UK banks have fallen back very, very sharply. That is another feature of the credit crunch.

Alright what's happened to some of these UK institutions? Thank you, quiet please. Thank you. OK, so what's happened to these things? Now, remember four institutions had particularly strong reliance on wholesale money markets at the top of my list. Northern Rock was top, Bradford & Bingley is another, etc. So what's been going on? Basically both Northern Rock and Bradford & Bingley are effectively being nationalised although a part of the Bradford & Bingley has been taken over by one of other international banks, Santander, which is a Spanish-based bank which has essentially come out of this rather well compared with other organisation. One of the things which happened when Northern Rock was nationalised is essentially, it started to run down its mortgage book. So essentially when people's mortgages came down for renewal they wouldn't, they found it so much harder to get a loan from Northern Rock. One of the things you might have noticed on the news yesterday was that basically the amount of Northern Rock mortgages which are currently in arrears is much higher in fact than most other banks in the United Kingdom. One of the reasons essentially is because of, basically the mortgages which should have run down first, or left Northern Rock were essentially the better quality ones. They were left with some of the worst ones.

So what else has happened? Well, HBOS, Halifax, Bank of Scotland, essentially that was taken over by Lloyds TSB. Lloyds TSB itself is announcing large losses today. The Alliance & Leicester Bank was taken over by Santander. So we have the nationalisation of Northern Rock when this first sort of came across, but there are some important long-term issues, which I think we need to think about. One is something is called moral hazard, which is a crucially important issue in economics. Basically the idea in this particular context is that essentially if we bail out the banks, if we really consider the banks to be too important to be allowed to fail, which has been the argument over the last couple of years, essentially, you know, they can go to the Bank of England for support. What is to stop them doing exactly the same rather irresponsible behaviour in the future? If they always know that there will be going to be bailed out by the Bank of England in the future. One of the real concerns about what has actually been going on is essentially even if the banks return the profitability, why will they change their behaviour? Will they still be putting out huge salaries to some of their staff or whatever? And what real controls can we actually impose upon those banks? If the banks themselves always know that there are going to be bailed out by government or whatever. That's really a big important issue related to the structure of what banks should actually be.

Part 9

Another big issue which we are going to have to grasp with I think in the future is issues of industry competition. Because there have been mergers, take-overs by some of these banks, the actual number of players in the UK market is actually falling. Does it mean in the future that we will have to regulate really quite strongly the sort of, the charging mechanisms which are actually made by the remaining banks, because essentially they are operating under conditions of monopoly? I haven't really grasped that one yet.

Finally, what about government responses to these things? Well the first thing was I guess a form of crisis management. There were very strong support for bank liquidity and the capital bases of the banks which were actually running into trouble. For example there were various purchases of banks assets, underperforming assets such as some of these mortgages, OK.

Second thing which we have experienced are, as we have seen, nationalisation of some of the banks and we have had support of takeovers or mergers between other banks. There have been a couple of very important reports come out recently which refer to the long, or possible long term structure of the financial industry. The first one was published by what is called the Financial Services Authority which is one of the regulatory bodies in the U.K. which is essentially looking to the future, putting suggestions about what structure regulation should actually be in the future. Well worth reading the reports some good analysis there. About a month or so ago the Treasury also produced a report on its responses about these things as well. But a lot of these things about in terms of regulation are still undecided.

Part of the problem is, of course, we can't decide these things in isolation from other countries. We are talking about very highly mobile capital labour in financial institutions. So the U.K. acting by itself is certainly not sufficient. So there are lots of things going on about trying to co-ordinate activities across the international community on these sorts of things.

There is also, it appears - as far as we can gather, a difference of opinion about what the appropriate approach should be between the government and the Bank of England. Can we actually sort of break up some of these very large institutions to make them rather more accountable? Very finally on just that, this week Barclays has already announced this week a return to profitability particularly from its capital activities but some of the worst institutions in these things, are still running at very, very large losses indeed. As taxpayers essentially we are paying the cost of these things. You might have seen that the budget deficit which the government is running partly, well very largely because of these activities is absolutely astronomical and it's going to be many, many years before we start to get around these things.

So very finally what's been going on in these things are not just an issue of high finance or whatever, not just something which affects relatively few people, it's going to affect everyone for many, many years to come. Primarily, even once we have got out of the current recession because of the government deficits, or budget deficits which has emerged as a result of all of these things.

Well that's probably more than enough for your first lecture of the day.

Thank you very much.