BANK OF ENGLAND

Speech

Macroprudential policy: Implementation and effectiveness

Speech given by

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I appreciate the opportunity to attend and address this first annual ECB macroprudential policy conference. Calling something the "first annual" is a commitment strategy that will tie the hands of successors, but in a positive, productive way. Macroprudential policy has been around for a long time in many different forms, but the global financial crisis led to a revival, and we are just now getting experience with it in highly developed, deregulated, globally integrated markets.

My keynote is labeled implementation and effectiveness, but I'm going to concentrate on implementation. Surely the macro and micro prudential changes that have been made since the crisis have been effective at making the system less crisis prone than it was in 2007-08, and very much less likely to require taxpayer support to maintain financial stability. Higher levels of good quality capital and minimum liquidity requirements at banks, less opaque instruments and interconnections in markets have made the financial sector more resilient to unexpected developments and less likely to behave procyclically with spillovers to the real economy. And, as we are seeing at this conference, there's a growing literature on effectiveness.

But we are still in the early stages of learning how effective macroprudential policy will be in highly developed, globally integrated markets. One of the challenges of macro prudential policy is the absence of clear metrics on how well we are doing; we can measure risk and resilience in the financial sector but direct feedback on the degree of safety, the decline of procyclicality and amplification, must be inferred - unlike the inflation, output and unemployment metrics we get monthly for how effective monetary policy has been.

I'm going to reflect on some aspects of implementing macroprudential policy drawn mostly from my experience on the Financial Policy Committee at the Bank of England, hoping these reflections will give you a flavor of the types of issues we have been dealing with and where research might have the largest payoffs in terms of effective macroprudential policy. These are my own views and do not necessarily reflect the views of my colleagues on the FPC.

The legislative remit of the FPC reads: "The responsibility of the Committee in relation to the achievement by the Bank of the Financial Stability Objective relates primarily to the identification of, monitoring of, and taking of action to remove or reduce, systemic risks with a view to protecting and enhancing the resilience of the UK financial system." I'm going to look at some of the challenges we uncovered as we approached a number of items on this list.

I've put them in four broad categories, which I recognize overlap and interact in a number of ways. They are first "the identification and monitoring of risks". Second, the determination of the systemic aspects of risks that are identified - the externalities that call for macroprudential action. Third, the design of policies to "remove or reduce the risks" and "enhance the resilience of the UK financial system", including the role of cost-benefit analysis in evaluating policy options. When exercising its functions under the Bank of England Act, the FPC is required by law to be sure "a burden or restriction which is imposed on a person, or on the carrying on of an activity, should be proportionate to the benefits;" and our explanation of any action "must include an estimate of the costs and an estimate of the benefits that would arise from compliance with the direction or recommendation in question, unless in the opinion of the Committee it is not reasonably practicable to include such an estimate." And my fourth topic will touch on the communication of policies and their rationale.

Risk identification is the foundation for macroprudential action, but it presents a number of challenges.

We are looking mostly for tail risks—unlikely events not fully reflected in market prices that might have systemic effects—events the financial system and its customers might not be fully prepared for. The FPC has identified some particular events that fit easily into the risk category - for example, euro area problems in 2011 and 2012; the June 23 referendum on EU membership. Risk identification can also focus on particular markets where terms and conditions of lending have eased or might do so in the future, sufficiently to threaten financial stability: in the UK we have paid a lot of attention to residential real estate; in the US leveraged lending has been a focus. But tail risks could be broader and more general, stemming from the general state of the financial cycle across a range of markets. Complicating the risk assessment is that interest in tail risk implies the need for information about the entire distribution of risks associated with a particular indicator, not just its mean and current value.

The FPC has a set of indicators to help it identify risks, but it is a work in progress and revising the list is a priority of the FPC in which we will be drawing on the work of you and other researchers. Among other things, we need to be careful not to let data availability drive the list; we should envision what we need and then try to reshape the data collection if necessary.

Judgments about the position of elements in the financial system relative to the distribution of possible outcomes, including the size of the tails, are necessarily based on historic experience. But the structure of financial markets, the behavior of asset prices, and the implications of a given level of, say, leverage have changed considerably over past decades reflecting deregulation, globalization of finance and economic activity, and technical change, raising questions about the weight of history in evaluating sustainable equilibrium values and the distributions around them.

For example, the FPC has viewed the credit gap as of very limited utility when assessing risk because it is based on the extension of a trend in credit growth that itself was greatly influenced by nonrepeating developments, like deregulation. Also, judgments about sustainable levels of bond, equity and other asset prices are greatly affected by estimates of equilibrium interest rates and term premiums going forward - matters of substantial uncertainty.

Still, for all the caveats, the indicators are valuable starting places for assessments of risks; they should anchor policymaker judgments in facts and make those judgments as systematic as possible. Moreover, they are an important input into the political oversight and accountability of the macroprudential authorities;

members of parliament have quizzed FPC policymakers on our published indicators and their implications. All authorities will benefit as research helps to develop better leading indicators of financial stability risks.

Importantly, the assessment of risk indicators is as much or more about their levels as about rates of change. Of course, the growth in credit relative to income is critical in our considerations, but in judging things like leverage or asset prices the question is where the measure is relative to its sustainable level. Once adverse events occur, there is a tendency to extend the recent adverse developments and declare that particular risk to be elevated. To be sure, how risks materialize may give us new information about the shape of the distribution and the size of the tail. But what we are likely to be observing as well is the crystallization of previously identified risks - moving along the distribution of risks. It takes discipline to focus on levels and differentiate the crystallization of existing risks from the discovery of new risks.

Much of the FPC's energy and activity around risk assessment has fed into the concurrent stress test scenarios and the setting of the countercyclical capital buffer (CCyB).

In the stress test process we have collaborated closely with the PRA, the microprudential authority. We have attempted to tell a coherent, if unlikely, story with our scenarios. In 2014 and 2015 the scenarios embodied particular risks interacting with the general state of the financial system. In 2014 we focused on UK domestic risks including a sharp rise in interest rates and its effect on the property markets. In 2015, a softening in global growth and increase in global risk aversion set off the scenario.

In 2016, we are undertaking our first Annual Cyclical Scenario (ACS), which is based on readings from a broad set of indicators and judgments about where in their distributions these variables lie and therefore how much they would move to get them deep into their tails in a severe stress scenario. Based on these indicators and other information, our broad judgment in March was that foreign risks remain elevated - despite having crystallized some in 2015 - and domestic risks were in the "standard" range - that is were no longer in the subdued post-crisis state but in general were not elevated, especially in light of still-subdued credit growth. These judgments were embodied in the set of stresses across a wide array of variables included in the stress test. If and as domestic credit growth picks up, borrowers and lenders become more leveraged, and asset prices rise relative to fundamentals, the stresses will become larger; our stress tests will be countercyclical.

The results of the ACS will be one element in our consideration of the appropriate CCyB. Given our assessment of the general risk environment, we have already set the CCyB at .5% of risk-weighted assets. We expect it will end up in "the region of one percent" when risks in general are neither subdued nor elevated.

Every other year, the ACS will be accompanied by an exploratory scenario keyed off a specific set of risks that policymakers consider important for assessing the financial system's resilience.

Identifying externalities is an essential step between identifying risks and taking action. Macroprudential action to remove or reduce risk or build resilience should require a finding that materialization of the risk would be systemic -that it is a risk to the ability of the financial system or a significant part of it to exercise its critical functions and its materialization therefore would have important adverse effects beyond the parties directly involved. We must ask what is the externality that macroprudential policy should require the private market to internalize - to incorporate into prices? Why are we constraining the actions of a willing borrower and willing lender?

These questions are relatively easy to answer when realization of the risk would directly impair the ability of the financial sector to perform its functions of intermediating, supplying credit to the real economy and distributing risk. Recognizing the externalities of financial failure, governments created or empowered central banks to provide liquidity insurance to financial firms. And, during the last crisis they even provided capital to some institutions. This doesn't absolve macroprudential authorities from weighing costs and benefits of an action such as raising capital requirements, but it does get over the hurdle of whether there is a public benefit worth weighing against costs.

We found ourselves in a more interesting discussion about externalities when we were considering recommendations that would affect the terms and conditions under which households could borrow in the mortgage market. We got into the discussion because we saw a pickup in house prices nationwide and the MPC expected future house price increases to exceed increases in the general price level and in the growth of nominal incomes. Those projections were against the background of already high debt to income ratios in the household sector. We were not so worried about the effect on bank resiliency of a further buildup of debt as house prices rose relative to income, in large part because, unlike in the US, households cannot walk away from their mortgage loans in the UK, and in fact defaults had remained reasonably low even under the very adverse circumstances of the recession. Rather we focused on household borrowers and the response of the heavily indebted households to an unexpected rise in interest rates or drop in income.

In the UK as in the US heavily indebted households cut back disproportionately on spending in the recession. This effect is probably more pronounced in the UK, despite floating rate mortgages being more common, because of the responsibility of borrowers for their debts. The externality we focused on was the business cycle effect of the behavior of heavily indebted households, not the vulnerability of lenders.

To address this potential externality, to reduce the odds on possible declines in the resilience of some household borrowers, we limited high debt to income lending and required lenders to test loan affordability against an appreciably sharper increase in interest rates than built into the yield curve. Notably, we intended our actions as insurance against deterioration in lending standards; we didn't anticipate much if any effect on current lending terms but were acting pre-emptively before we saw widespread problems.

Policy design is the next step once risks have been identified as systemic. What do we need to do to reduce or remove the risks and build resilience - and what policy best satisfies the criterion that the benefits exceed the costs?

In general, having a wide choice of instruments will help in finding a policy that addresses the issues with benefits exceeding costs. Being able to target a specific risk or identified shortfall in resilience is more likely to minimize costs relative to benefits. If the source is very specific - say residential real estate lending - policy operating directly on the terms and conditions of the lending that are potentially concerning is more likely to be effective and less likely to have adverse side effects or unintended costs.

The FPC has always been able to make recommendations to any one on anything. But our stronger powers of direction - the power to change regulation more quickly and directly - have evolved over time and in particular have come to encompass terms of lending for some specific types of credits. In 2015, amid public and policymaker concern over the implications of the rise in house prices, we received powers over loan to value and debt to income measures for owner-occupied mortgages. We have asked for comparable authority for buy-to-let residential mortgages, importantly because of the potential for house purchases for rental to contribute to tail risk in the overall residential housing market, and look forward to getting those powers this year.

Having a variety of instruments including targeted choices is important for interactions of macroprudential with monetary policy. Using broader instruments, such as overall capital requirements, to deal with sectoral risks probably would have greater effects on overall intermediation costs and on the equilibrium or neutral interest rate, r*, requiring larger monetary offsets to achieve employment or price stability objectives. And the more instruments the macroprudential authority has to deploy, the greater the confidence that it will be effective and the lower the odds that monetary policy will be called on to deal with financial stability risks.

In my view, public welfare is enhanced when monetary policy can concentrate on business cycle goals while macro and micro prudential policies concern themselves with the financial cycle and financial stability. But if building risks to financial and economic stability can't be addressed by macroprudential policy, they may need to be by monetary policy. The US is a concern in this regard because the authorities there appear to have paid little attention to many of the macroprudential aspects of real estate lending and to developing instruments to deal with the real estate cycles that have been so prominent in financial cycles in the US.

Cost-benefit evaluation is a critical mindset and discipline for regulators and one that the FPC is required to use if practicable as we design our policies. We do, but have found a number of challenges.

The main benefit of macroprudential policy will be the avoidance of output loses stemming from a crisis or from the amplification of shocks by the financial sector, and we are seeing that losses following a crisis can be quite large and extended. But the expected gains in terms of reduced odds on a crisis as a consequence of a particular macroprudential action are hard to estimate and depend on interpretations of past crises and on the models used to project the consequences of the past into the probability of a new crisis. Among other things, the marginal benefit of a particular policy choice and the calibration of that policy in light of the costs depend on the effects of and interactions with other policies. This is especially challenging given the number and complexity of the policy changes that have been undertaken since the global financial crisis.

The cost side is also difficult to estimate with confidence. There are the direct costs imposed on the institutions implementing the new policy. In addition, the potential side effects of new regulation, such as the possible impacts of leverage ratios on market liquidity that have received so much attention of late, are hard to identify and anticipate; indeed these collateral and often unintended costs may be visible only after a policy has been in effect for some time, raising questions about how and whether regulations might need to be re-examined and adjusted once their benefits and costs become more evident after implementation.

It is also important to estimate the possible macroeconomic costs, as well as benefits, of macroprudential regulation, which tends to raise the cost of intermediation and credit as it internalizes externalities. Those higher costs can affect longer-term growth by shifting the composition of output, say from capital spending to net exports as monetary policy eases to offset the effects of macroprudential policy on hitting the inflation target. These types of costs are likely to be second order.

But output costs could be much higher for a time if monetary policy has limited scope to ease, say near the effective lower bound for interest rates. In these circumstances, the macroprudential authorities might have to look for ways to structure their policies that reduces the adverse consequences for the economy. In the early years of the FPC we were focused on the need to rebuild the resilience of the UK banking system and restore confidence in it by raising capital requirements. We also were conscious that, depending on how they were implemented, higher capital requirements could act to counter the MPC’s attempts to bolster growth and be inconsistent with achieving our secondary objective for supporting the government’s policies for economic growth and employment. We viewed the higher capital as supportive of growth over time because it was a necessary condition for easing bank credit restraint. But to ease transition effects we also emphasized that plans to raise capital ratios should rest on increasing levels of capital in the numerator of these ratios rather than reducing lending in the denominator.

My fourth and final topic is the *communication and explanation* of macroprudential policy. Once the risk and its externality are identified and the policy decided upon, public communication of the decision, its rationale, and its expected effects is both difficult and necessary.

The FPC does a lot of public communicating. We always explain the reasons for exercising our powers of direction or recommendation. Where we are given powers of direction we publish a statement of the general policy we propose to follow in relation to the exercise of that power, which may include when and why we might activate our authority, and also the channels through which we expect the effects to run. We publish twice yearly Financial Stability Reports (FSRs), which include among other things an assessment of risks and resilience, an explanation of any new policies adopted, and an update on the progress made on past policy actions. On the off quarters we publish FPC statements that have evolved into something like executive summaries of FSRs - assessments of risks and resilience and explanations of policies. And we publish a record of our meetings in which we have attempted to capture the scope of the discussion leading up to our decisions, which to date have been made by consensus.

We reach out to the press, to the financial sector, to academics, and most importantly we have considerable interaction with the parliament through testimonies and exchanges of letters between the Governor and the Chair of the Treasury Committee. And members of the FPC make regional visits and meet with businesses as well as local press.

Nonetheless, I'd guess most people do not know or understand what the FPC is trying to do. Among other issues, the language of all this verbiage is often highly technical and specialized, and its effect on the daily decisions of most people is quite indirect, much more indirect than the interest rate they get on their deposit or pay on their mortgage as a consequence of the actions of the MPC. And the lack of knowledge and understanding of macroprudential policy is even more deeply embedded in the US - including among our Congress and judiciary.

But political and public support will be critical. Effectie countercyclical macroprudential policy will be pre-emptive - taking away the credit punch bowl as the party gets going and making sure it is full when the party dies down. Experience in the US leading up to the crisis was that even small attempts to tighten supervision and raise questions about risk management in the boom were met with fierce industry and political resistance. And releasing buffers when the financial sector is under stress as risks crystallize may also be difficult for the public to understand and support. The absence of public support invites political interference.

I was pleasantly surprised at the lack of adverse public reaction to FPC's recommendations on owner-occupied mortgages. Two aspects contributed. First, communication ahead of time: we built the case well in advance of action in speeches and in our publications that house prices were rising rapidly and not just in London, and that the consequences of this could be serious under some circumstances; and we explained carefully our thinking after we acted. Second, the nature of our actions: they were not intended to tighten existing lending standards materially but instead mainly to constrain possible future developments.

When I've described this experience to US observers they are highly skeptical of a similar muted reaction to comparable steps in the US. They fear that consumer groups and banks and their political supporters would find common ground in opposing actions that might constrain mortgage credit availability. But there is a history of damaging real estate cycles in the US that everyone remembers. I'm not arguing that there is a problem right now; but no one is talking about the potential for future problems and the apparent lack of tools to deal with them. Surely a stock-taking of instruments available if credit conditions deteriorate would be helpful and might set the stage for action before those conditions actually came about. Lars Svensson told us about the annual report on mortgage markets of the Swedish FSA - a good example of pre-emptive communication setting the stage for any pre-emptive policy that might become necessary.