



BANK OF ENGLAND

Speech

How can the objective of macroprudential policy be operationalised, given the high uncertainty about the state of the financial system?

Speech given by

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The conference organizers have raised a critical question for macroprudential policy. Operationalising policy—identifying the risks that merit mitigating actions, identifying the appropriate action, and then assessing its effect after action is taken - is a major challenge for macroprudential authorities.

In many jurisdictions, including the UK and the US, the impetus to take action to contain systemic risks in financial markets only followed the global financial crisis when it became painfully clear that an institution-by-institution approach to oversight was not enough to assure that the financial system could continue to deliver essential services under severe strain.

Consequently, we don't have much experience with these policies in open globally integrated financial markets that would generate reliable empirical relationships between actions and results. We don't even have a widely accepted macroeconomic model rich enough to generate financial instability, in which we could embed emerging empirical relationships to test alternative strategies. The risks themselves are not easily observable since we are looking for tail risks whose crystallization would have important externalities. And judgments about the size of the tail—the degree of risk—often depend on a comparison of current conditions to some notion of “normal and sustainable.” Finally, we don't have a ready feedback metric—like the inflation rate for monetary policy—that can tell us how well we are accomplishing our objective.

That's why conferences like this one are so important. Especially in these nascent years of macroprudential policy in advanced economies, the kind of research and questioning we are experiencing here can play an important role in improving policies for financial stability.

Scepticism about our ability to spot emerging risks and design appropriate policies seems to have held back the use of macroprudential policies—especially countercyclical policies—in some places¹. In the UK, Parliament has given the Financial Policy Committee at the Bank of England responsibility for “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.” And in pursuit of that mandate we have made many judgments and taken quite a few actions based on a variety of indicators and techniques. Although identifying risks and gauging resilience poses significant challenges, we have found sufficient empirical regularities tied to financial instability in historical experience to justify taking action.

We make heavy use of concurrent bank stress tests to judge whether we need to take steps to better assure that banks will be able to continue providing UK households and businesses with credit and other financial services in a severe stress. The scenarios we use to test bank resilience are explicitly countercyclical—larger deltas in better times - and keyed to a very severe levels of stress; historical experience with economic and financial cycles explicitly informs scenario design. The scenarios also

¹ See for example [Governor Tarullo's](#) views.

incorporate specific risks that appear important at the time, such as a global recession or a combination of recession and higher interest rates as might result from capital flight post Brexit.

The tests are well-adapted for one of their major uses—setting the countercyclical capital buffer for the UK banking system. We have judged that the appropriate level of bank resilience requires that the CCyB be set in the region of one percent in standard risk environments, and the stress tests support this result. They tell us directly about the capacity of the banking system to absorb losses in the stress and remain well enough capitalized to meet the hurdles we have set, which are designed, also in light of experience, to be high enough to assure continued access to funding and the ability to lend.

We have also used the stress test results to evaluate how banks are gauging the capital they hold against particular risks, such as those from consumer credit. When we saw deficiencies in some banks' modelling in that regard the microprudential authorities took steps to mitigate the risk. And we have used the information from the tests to gauge the resilience of the system to risks that were not explicitly embodied in the scenarios, in particular that the banks would be able to weather a cliff-edge Brexit.

In between stress tests, we use an array of indicators to judge risk environment for banks and the appropriate CCyB. We pay particular attention to credit growth relative to income, in light of historical experience that rapid credit growth is often a precursor to financial instability². But we also look at other indicators, like spreads of bank loan rates over base rates and of rates on risky bank loans relative to those on safer loans, to help us gauge shifts in credit supply that might come back to haunt the banking system.

We have taken several actions in mortgage markets, but there our steps were targeted more toward preserving borrower rather than lender resilience. Experience in the UK is that borrowers honour their mortgage obligations, even under adverse economic conditions, limiting the risks to lenders. But heavily indebted borrowers do reduce consumption disproportionately in response to a negative income or positive interest rate shocks, amplifying economic downturns. We used historic and cross-country data to identify debt burdens where shocks produce an outsized cut in consumption, and we set loan-to-income and interest rate affordability tests to limit the growth of at-risk households.

We have identified risk in other ways as well. For example, we have asked Bank staff and the microprudential and conduct authorities to do deep dives on a variety of possible risks and we have used their reports to gauge the salience of these risks for financial stability. This year we are gathering information about the financial stability implications of ETFs, fintech, fast markets and provision of cloud services to the financial sector.

² See recent speeches by [Ben Broadbent](#) and [Jon Cunliffe](#).

As that list illustrates, a number of those deep dives have been focused on risks outside the banking sector, where our regular information is less complete. This is part of a disciplined and structured examination every year, with the potential for recommendations to the Treasury about the regulatory perimeter.

Some tail risks are very clear without the need for extra information or indicators—cyber-attacks, cliff-edged Brexit, the eventual disappearance of LIBOR. For these we identify steps to mitigate the risks and build resilience. For cyber we are developing expectations for firms to be able to restore various services after an incident, with the speed dependent on the systemic importance of the service. For Brexit, in addition to the stability risks posed by the macroeconomic effects of a departure without transition, we pinpointed a number of ways cross-border flows of financial services could be disrupted. We listed the ones that could affect financial stability in our public Brexit checklist, identified specific ways they could be mitigated, and kept track of progress toward mitigation with a traffic light red-yellow-green system.

In sum we have used a variety of sources of information to identify risks and gauge resilience. To be sure, we are handicapped by the small number of financial cycles amid rapid structural and technological change. And our actions haven't been tested yet by a major adverse economic or financial shock. But we think we have identified enough historical regularities to meet our legislated mandate. To some extent a diversity of approaches can provide a cross check—the indicators conform with the results of the stress tests or information deep dives? And disciplined economic analysis, policymakers with market experience, and common sense are essential ingredients in macroprudential policy.

But those challenges listed at the beginning of my presentation are valid and there is considerable room for improving our ability to identify risks and build the necessary degree of resilience. I'll list four areas deserving of priority for researchers and practitioners.

1. **Make the stress tests more macroprudential.** We should stick to the discipline of countercyclical scenarios, with as many variables as possible stressed to the same severe level each round so that the deltas rise and fall with the cycle. Within that basic framework, we should be paying particular attention to asset categories or lines of business that are growing especially rapidly or are seen as unusually profitable³. We should also be looking for correlated positions and important interconnections among stress-tested banks that could amplify shocks.
2. **Refine the list of indicators.** The indicators we follow should reflect recent research and experience and incorporate information on risk distributions—the size and shape of the tails. These indicators can play important roles in making our actions more systematic and in helping the public and the legislature hold us accountable.

³ As suggested by [Greenwood, Hansen, Stein, and Sunderam](#).

3. **Continue to develop metrics and techniques for identifying and analysing risks in non-bank financial channels.** Visibility on these increasingly important channels is sometimes limited and oversight responsibility non-existent or not well focused. We need continued research into these markets—who borrows, who lends, what are the risks? And we need more modelling of risks outside banking to give structure and focus to our efforts to understand.

4. **Work on indicators of overall risk that aggregate across an array of risk metrics to inform policymaker assessments.** Work at the Bank and the IMF on GDP-at-risk is promising and, in its most recent incarnation, uses both financial conditions and credit growth to assess risk of GDP falling into a very low tail. The FPC also uses a measure of the number of indicators that are at a substantial distance from mean values to try to assess overall credit conditions. Aggregate indicators can't replace the kind of detailed analysis that is required to identify specific risks and take appropriate action to build resilience. But they can be a useful check on the overall state of the financial sector and the judgment and decisions of the policymakers. Reasonably reliable aggregate measures would be an important focus for communication with the legislature and the public, aiding accountability and understanding.