

## **Sir Andrew Large: A framework for financial stability**

Speech by Sir Andrew Large, Deputy Governor of the Bank of England, at the International Conference on Financial System Stability and Implications of Basel II, Istanbul, 18 May 2005.

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### **1. Introduction**

#### ***i) Vulnerabilities in Financial Stability***

It is clear that rapid growth in size, complexity, and diversity of global financial markets has added new dimensions and challenges to the process of maintaining financial stability.

Traditional concerns remain that unwise credit exposure can result in insolvency, and systemic instability. But today there are a new series of hazards. Credit risk transfer has introduced new holders of credit risk, such as hedge funds and insurance companies, at a time when market depth is untested. Systemically significant issues could increasingly arise from market related risks, or from single point of failure risks in the market infrastructure as ever greater volumes of transactions pass through. Equally the growth of derivative instruments and advent of a range of new asset classes, despite added dispersion and better risk management, have added to the risk of instability arising through leverage, volatility and opacity. No wonder that those involved in financial stability work have much to think about!

#### ***ii) Introducing a Framework for Financial Stability***

The purpose of my remarks today is not to analyse these threats. Instead I want to discuss how to approach some of the challenging issues faced by many central banks as we seek to decide how best to organise our work and to allocate resources in order to promote financial stability.

We need to be clear, accountable and transparent as to how we devote our resources in this area. And just as the financial system becomes more complex, so the judgements as to what we do and what we do not do are increasingly difficult. That is why we need a framework – a set of organising principles – that enables us to provide context and understanding to our endeavours, to provide a source of focus and rigour to our approach, and to motivate our people.

The issues are, I believe, of general application. Though you will forgive me I am sure if I start by looking at the framework within which the Bank of England, as a non-regulatory central bank with a remit for system-wide stability, addresses the vulnerabilities.

### **2. Challenges in Creating a Framework**

#### ***i) Monetary Policy***

I want to start by considering the governance of the Bank's accompanying mandate, the conduct of monetary policy. This highlights the clarity of our accountability in the monetary policy arena. In line with many central banks, we have a mandate in statute – the Bank of England Act – to conduct monetary policy. The Government sets a target inflation level which we are required to meet.

Importantly we – and you – can see how we are performing month by month in relation to our mandate. We also have a tested analytical framework. We model possible future outcomes and we look at the balance of risks around a central view. We can rely on experience and judgement to make regular policy decisions. And we can alter our policy decision on interest rates each month as the data and circumstances evolve.

#### ***ii) Financial Stability and why it is different***

If financial instability occurs, costs to society may be high. Damage to our reputation could be potentially high too. Yet judging the optimal amount of resources to devote to prevent crises is problematic. What degree of resilience do we want? And what should we be prepared to pay for

insurance? This is a familiar problem in public policy – what is the optimal size of the fire brigade or army?

The challenges we face in seeking to maintain financial stability are very different to those in the monetary policy arena.

- Firstly there is neither a clear over-arching analytical framework nor a commonly agreed set of indicators of incipient financial instabilities.
- Secondly the task is made harder because we are dealing with tail events – low probability scenarios – rather than central projections. It is about aberrant rather than normal behaviour and situations: less predictable and harder to model.
- Thirdly there are a number of different potential policy instruments that can affect the financial environment in various, sometimes conflicting, ways. And by no means are all in the hands of central banks
- Fourthly national financial stability responsibilities are often shared. In the UK we work with Her Majesty’s Treasury (HMT) and the Financial Services Authority (FSA). For cross-border activities we operate alongside overseas central banks and supervisors.
- Fifthly although the roles of the UK authorities are outlined and published in a Memorandum of Understanding (MoU), this gives little guidance as to what financial stability is or a clearly identifiable target.
- And lastly it is harder to get motivational feedback – unless in unwelcome form should a crisis occur.

### **3. Defining Our Role in Financial Stability Oversight**

These factors pose a number of challenges in defining our role in financial stability oversight – what activities should we as a central bank undertake? To make these decisions, firstly we should identify the main functions that need to be performed in each jurisdiction to promote financial stability. Then we can look at the Bank’s own institutional mandate. And finally we can determine the most appropriate way to fulfil it.

#### ***i) The Three Essential Functions for Public Authorities***

There seem to me to be three essential functions to be carried out in securing financial stability: I think this is the case in most jurisdictions. Firstly, there are the roles relating to supervision of firms and markets where financial instability could arise.

Secondly, there is the oversight of the financial system as a whole - the systemic issues which could impinge on society. And thirdly there is the fiscal underpinning which may exceptionally be required to restore confidence in the event of failure.

The fiscal underpinning is a role for Ministries of Finance. The other roles can either be combined institutionally or separated. I am sure each model is represented here today. In the UK, HMT has responsibility for the fiscal underpinning, FSA for the supervision of firms and market regulation, and the Bank of England for the stability of the system as a whole.

#### ***ii) The “Must Dos” for the Bank of England***

The roles as such are set out with slightly more precision in the MoU, and it is from there that we start on our quest to decide what initiatives we – the Bank of England – should undertake, and how far we go with each. The MoU highlights three “must dos” for the Bank. I expect that these are similar in many central banks. They really define our mandate.

##### ***a) Assessment of Threats to Financial Stability***

Firstly we need to assess the threats to the financial system. We need to be in a position to inform ourselves and to advise HMT at all times on the implications for UK financial stability of developments in both the domestic and international market places. We do this by continually assessing threats to the system as a whole – “oversight of the systemic conjuncture” if you like.

So we look beyond the risks in relation to individual institutions, to the aggregate problems that can arise: through networks and single points of failure; through dependencies and interdependencies of firms and markets. In other words to areas where, if market forces and market participants are left to their own devices, problems could threaten the stability of the system. This means that we need to have our finger on the pulse and to maintain regular contact with key firms and infrastructure providers. Market intelligence is vital in this area: it is not enough to read about issues, we need to be learning about them first hand from key players and analysing our findings from a financial stability perspective.

The FSA also shares responsibilities in this area. They too will be asked for advice by HMT. Their starting point is the assessment of the strengths and weaknesses in the individual institutions and markets they supervise, and the potential consequences of problems or failures at individual institutions.

An important factor for the Bank relates to London's position as a major financial centre. Although our specific focus and interest is the systemic conjuncture as it affects the UK, possibilities of contagion in an increasingly global market mean that we have to be alert equally to developments in global capital and financial markets. And it means we have to understand the dynamics and interrelationships of markets; how new products work; and the possible behaviour patterns of intermediaries, investors, and borrowers. Above all we need to be focused on where major risks are most likely to emerge and the market dynamics if those risks start to crystallise. And we need to distinguish those which are systemic from a myriad of fascinating developments, many of which are just "noise" but which could otherwise distract us.

*b) Risk Reduction: Oversight of Payment Systems*

The second area where we, and typically other central banks, are required to perform is oversight of payment systems. Payment systems facilitate economic transactions of goods, services and financial assets and are an essential component of a well functioning financial system. So reduction of risks in these systems, for example through the introduction of our Real Time Gross Settlement system, is clearly a priority from a systemic perspective.

*c) Provision of Liquidity and Preparation for a Financial Crisis*

And thirdly the MoU stipulates that we need to be in a position to inject liquidity at all times. This means that we must be able to provide liquidity in normal times, as well as in times of stress or crisis. This puts an increased onus on well developed and tested crisis management plans, and a particular focus on ensuring that we are able to undertake a range of official financial operations in exceptional circumstances.

#### **4. Financial Stability: Parallel Processes**

Recognition of these three "must do" areas is a starting point in deciding the scope of our financial stability work and in enabling us to fulfil our MoU mandate. But it does not provide a clear steer on what we actually have to do to carry out our functions efficiently and effectively. Regarding long term thinking, which might one day lead to an analogue to monetary policy, we are undertaking a research project. This is separate from our day to day activities where a set of organising principles can be used operationally to handle today's issues.

*i) Research and Development: Creation of an Analytical Framework*

The research project is an attempt to devise an analytical framework as an analogue to that in monetary policy: to help clarify some of the differences I outlined earlier and to provide greater certainty and focus. As with the development of monetary frameworks, this will be a medium to long-term endeavour. This may sound overambitious. But even modest achievements towards it would enhance understanding of what financial stability oversight is about, and what our priorities should be in seeking to ensure it. And so it could assist our quest for clearer accountability and more transparent governance arrangements.

This quest gets to issues such as how to define our financial stability objective, how to articulate indicators of financial stability, and how they relate to each other. It provides the possibility of

calibrating systemic risk and developing tools that could potentially be deployed to reduce such risk, and will include scenario analysis and macro-stress testing.

In reality, it is unlikely we will converge on a single model which captures systemic risk in its entirety. But by developing and calibrating a suite of models we hope to make some progress towards gauging fragilities and frictions in the financial system better – how likely they are to arise; on what they depend; and, ultimately, what pre-emptive mitigating action might be feasible. This could put financial stability analysis on a more similar analytical footing to monetary policy – albeit with a greater amount of uncertainty regarding eventual outcomes.

With time we can review the outputs of this research work. We can then operationalise those that are relevant and robust to help decide our ongoing activities. In other words, the outputs of this R&D activity could become inputs to prioritising our day-to-day risk reduction activities.

## **ii) Ongoing Activities: Organising Principles**

In the meantime we have to address the real risks of today. How are priorities to be set? Financial stability is an area where there are so many things we could do. So we need to have a set of organising principles to help us prioritise and focus. I'd like to describe the process we go through in addressing the difficult decisions – how much to do, and how far to go.

One could make a case for a huge empire of threat assessment on the basis that seemingly remote events or threats could crystallise into a financial crisis. For example, what resources would it have taken to foresee that default of the Russian government on its debt in 1998 would, through a complex chain of events, eventually result in the failure of the hedge-fund Long Term Capital Management in New York? A failure which importantly was judged as having wider significance. Equally what resources could it be wise to devote to assess what implications, if any, the downgrades of GM's and Ford's debt this month might mean for the financial sector and ultimately for financial stability.

Alternatively one might take a hardline view that unless an activity falls fairly and squarely, in the short run, into one of the "must do" categories, it should be discontinued. For example, we could in theory simply ignore risk emanating from overseas – even in an international financial centre like the UK – on the expectation (or hope) that others would take care of these risks on our behalf.

Common sense suggests that the answer lies somewhere between the two. But difficult judgements are involved. So we have to devise a rigorous process to scrutinise our actions. A valuable approach is to set out the practical actions we intend to achieve – the "outcomes" or "deliverables" – and then to challenge them. We do this from two points of view.

Firstly we need to be clear why we are pursuing a particular deliverable. Is it a market failure justifying any intervention at all? What real impact will the work have on fulfilling our mandate? How closely does it relate to the "must dos"?

Secondly we need to think through the costs, benefits and risks associated with the action from the points of view of both likelihood and impact. What will be the risks to society, the economy and even the Bank if we do not do it? How might these risks be reduced if we do do it? How well placed are we to do it as opposed to others? How confident are we of achieving the intended deliverables – particularly when we need to rely on others? Do we have influence to ensure action is taken?

The answers – difficult as they may be to define – help us in prioritising and resource allocation; and provide sunset provisioning in deciding whether to continue with particular strands of work.

## **5. Ongoing Activities: The Matrix**

### **i) Uses for the Matrix**

There are many types of activity, and many sources of threat where we could be active. So we need organising principles to make sense of where particular actions fit into the landscape of our financial stability work. It is only then that we can evaluate competing priorities, by subjecting each "bid" to a common set of challenges. To do this we find it helps to use a simple matrix. This adds objectivity to what is in many senses a subjective process. Here is an example:

## MATRIX: ORGANISING PRINCIPLES FOR FINANCIAL STABILITY

	Sources of Threat			
Activities	Credit Risk	Market and Liquidity Risk	Infrastructure (including Payment Systems)	International Architecture
Assessment of Threats to Financial Stability				
Risk Reduction				
Preparation for and Managing a Financial Crisis				

The matrix is a common sense map, which enables us to visualise why something is being done, and where it fits into the overall financial stability effort. The specific activities and deliverables that are located in each of the boxes can be scrutinised to see if they meet our objectives or if they should be discontinued.

This helps us decide on the level of resource and the nature and qualities of people we need. It also helps with budgeting, and provides a basis for motivating good performance.

To explain the relevance of the boxes let us look first at the columns: sources of threat. Our desired **end objective** is to promote financial stability by seeking to prevent threats from crystallising, or at least to reduce their impact. Then we will look at the rows – the different types of activity we undertake: **the means** if you will to achieve our ends.

### *ii) Sources of Threat*

First, the columns: the sources of threat.

#### *a) Credit Risk*

Financial crises have traditionally arisen where the solvency of one or more institutions either crumbles, or is perceived to be in danger of doing so, in a way that threatens the financial system. So we need to focus on credit concentrations, credit aspects of prudential standards, credit pricing and terms etc. We need data and intelligence to do that. Understanding credit conditions and vulnerabilities is quite well developed territory. But new threats have arisen, particularly from sophisticated credit transfer instruments. This is a tricky and opaque arena. It is hard to know where concentrations of credit risk actually reside and even where credit risk ends and market risk begins. In addition there is the increasing range of participants who are also taking on credit risk. Of course in addition to this we can – and do – think about credit risk standards like Basel II. We focus on the systemic aspects of prudential design since in the UK FSA focuses on supervisory issues.

#### *b) Market and Liquidity Risk*

As the global capital market has expanded on the back of securitisation and derivatives increasing vulnerabilities arise. Change has been so rapid and development so fast that it has been hard for any of us to keep up. Given the multitude of new instruments and new markets that have appeared and the resulting increase in risk, this is a significant area of work for us.

There is of course much to be done in understanding the complex interdependencies and concentrations, and how these might impact on financial stability.

So we need data and market intelligence in this area. And we need to improve our ability to make ex-ante judgements about the possible behaviour of both investors and intermediaries, as well as the potential depth of markets. Equally we need to be sure we would have relevant information and understanding of markets and agents should problems arise.

c) *Infrastructure (Including Payment Systems)*

Focus is also important in the field of payment, clearing and settlement systems. Historically payment systems were primarily domestic entities, but as markets have become more globalised so too has the underlying infrastructure. This has helped to enhance efficiency, but leads also to added network or “single point of failure” risks. As 9/11 showed, when problems arise in this area liquidity injection may be needed to prevent market or institutional failure, and risks of instability to the financial system could mount swiftly.

This brings us to one of our “must dos” – oversight of payment systems. Based on adequate data and understanding we work here on: enhancing interoperability, strengthening risk management, strengthening business continuity resilience, and improving governance.

d) *International Architecture*

International architecture and emerging markets exposures are a broad arena where there are particular risks and complexities which lead us to look at it separately. In response to the wider environment, constant adaptation is needed both of the architecture itself and the institutions within it, such as the IMF. In terms of our quest for financial stability, this focuses specifically on sovereign debt, crisis prevention and resolution. Progress has been made since the Asian Crisis, but significantly more is needed to build on the emerging elements of the exceptional access framework, and the Fund’s lending-into-arrears policy, but also Collective Action Clauses, and the recently devised Principles for Stable Capital Flows and Fair Debt Restructuring in Emerging Markets.

In using the matrix to categorise sources of threat there are of course a number of ways one could cut the cake. Credit exposure to emerging sovereign debtors for example can appear in the “credit” and “international architecture” boxes.

iii) **Activities**

Now we can move to the rows. To use the matrix as a location device to focus our efforts, decide on deliverables and enhance our resource allocation, we need to create the “boxes” by considering the types of activity we could undertake to address each main source of threat – the rows.

a) *Assessment of Threats*

Firstly we need to evaluate threats to the system. We need a process of data collection and assessment to analyse information and market intelligence from multiple sources. This “horizon scanning” enables us to get early warning of how and where threats could appear.

We cannot do all this without knowing how markets work. Typically we obtain intelligence about what is going on from a number of sources, including a group of experienced staff who are operationally active in financial markets. We then evaluate and assess the threats from this intelligence. This needs people who are motivated to think through and identify new aspects of risk and threats, who can move with intellectual agility and flexibility between risks as they arise. This enables in turn high level management to judge the risk and allocate resources accordingly for risk reduction – as well as stopping work if threats no longer seem relevant.

A key challenge here is distinguishing between slow burn issues (such as a gradual shift towards more exotic financial instruments) and the more immediate issues relating to, say, the prospect of a major market default. In each case it is important to understand the potential threats to financial stability: but the timescales and tools are different. The matrix helps to start the process.

Above all we have to clarify the types of threats we are looking for. An issue here is the risk of “missing something”. Not acting on something seemingly minor may have significant consequences for financial stability and costs compared to the resource saved by ignoring it. So the stakes are high in getting this right – though we need here to be realistic as particularly in the early stages the significance of developments can be hard to read.

b) *Risk Reduction*

Secondly, risk reduction or mitigation. Here we seek to make the financial system more resilient. This is the world of risk management, prudential standards, liquidity standards, resilience of payment

systems etc. It can involve the promotion of codes and standards over a wide field ranging from accounting to improving legal certainty, and management of countries' external balance sheets.

Decision making about priorities is particularly challenging because we cannot be clear ex-ante how well the mitigation techniques will work, and we often need to rely on others to implement them. In addition we need to ask whether we are the right party to act.

We also need to think about the relevance of our activities to our mandate – or “must dos”. In some areas, for example payment systems – one of our “must dos” – it is clear that we have a responsibility to reduce risks. In this case the questions we need to answer relate to the degree, methods and resource implications.

But in other areas whether we should act is less clear cut. What particular contributions can we make and are there any areas where we can sensibly act alone? We need to ascertain areas where we can achieve results both domestically with HMT and FSA, and internationally with organisations such as the Basel Committee, the Committee on Payment and Settlement Systems and the Financial Stability Forum.

Perhaps I can mention one area to which the challenge process suggests we should devote considerable resources – global institutional liquidity. As I have said before this is an area of potential vulnerability that has developed alongside the rapid globalisation of markets and of firms operating within them. I personally feel that it has been somewhat overshadowed in recent times by work in other areas such as capital adequacy. We feel that we can make a particular contribution here – both owing to our position in such a major global financial centre and because, in sterling at least, we are a potential provider of liquidity. So we justify devoting significant resources to the analysis of liquidity issues, and the development of potential risk reduction strategies for liquidity problems – nationally and in particular internationally.

At the other extreme, whilst we feel strongly about the desirability of robust and widely applied accounting standards – and are prepared to express our views on the big picture aspects of this from time to time – we do not devote significant resource to analysis, or lobbying in this area.

#### *c) Preparation for a Financial Crisis*

And finally, tail event territory though it may be, we need to undertake preparation for financial crises. We need to think forward to being “in-event” where instability has actually been triggered, whether by a business failure of a firm or firms or by a terrorist or other disruptive event. We need to prepare now, in advance, to enhance predictability at what would be a time of great uncertainty. We need to know how we will work with and communicate with public authorities and with the private sector.

There is a different set of factors which impact our decisions in this area. First, our “must do” roles are dependent on crisis preparation and an adequate general understanding of how the financial system operates, with all the complexities entailed.

Second, while each national authority has its specific responsibilities to fulfil, the speed with which decisions would then need to be made and actions implemented make it also essential to act effectively as a single operational unit. In the UK the FSA, HMT and the Bank have developed mechanisms designed to turn this into reality and to provide necessary confidence to the market.

And third through testing programmes, we can obtain feedback as to whether our efforts are likely to prove successful and to refine preparation as we go along.

The costs to the economy of failure would be high and the expectation is that we would be well prepared. This puts a strong onus on collecting in advance up to date information on firms and markets, or being confident of its availability and source. And also of regular and exacting testing programmes – working with other authorities and with the private sector.

## **6. Conclusion**

So in conclusion, the field of financial stability oversight presents us with plenty of challenges. Not only is the world more complex, but we need to devote real thought as to how best to operate and organise ourselves so as to contain risks.

Defining the resources you need, and how to deploy them is challenging in itself. My prediction is that as the system's complexity increases we will all find ourselves asking the same questions:

Just what should we do? Why? And what effect will it have?