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The macroprudential approach to regulation and supervision: where do we stand?[1]

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Introduction[2]

It is probably fair to say that just a decade ago few banking supervisors would have recognised the word "macroprudential"[3]. They would have been quite willing to characterise their tasks as being of a "prudential" nature, with reference to the need to instil "prudence" in the behaviour of regulated institutions. But, if asked, they would have found it very strange that anyone would wish to highlight any "macro" aspects to what they did. After all, the word "macroprudential" echoes the term "macroeconomics" -- the branch of economics that studies how economies as a whole work. And this would no doubt have seemed quite remote from their day-to-day tasks, targeted to ensuring that individual institutions are safe and sound. If a qualifier had to be used at all, "micro" surely would have been a more fitting one in their eyes.

Nowadays, it is probably only a slight exaggeration to say that the word "macroprudential" has become a household name. This by no means implies that all supervisors have become "macroprudentialists". Far from it, it is one thing to be aware of a particular dimension of, or perspective on, the tasks one performs and quite another to have assimilated it and embodied

[1] Paper prepared for the special volume celebrating the 20th anniversary of Kredittilsynet.
[2] The views expressed are my own and do not necessarily reflect those of the Bank for International Settlements.
[3] It is not clear when the term was first used. At the BIS, however, the term has been employed for at least a couple of decades to describe broad financial stability policy concerns, even if the precise meaning has often been elusive.

it in actual policies. But it does indicate that the intellectual climate of opinion has evolved substantially.

What follows assesses in more detail the extent of that shift and its future prospects. To set the stage, the first section explains briefly what is meant by "macroprudential" and the second highlights the importance of the corresponding dimension in regulation and supervision. The third then takes a critical look at the degree to which this perspective has been gaining ground and made operational in policy frameworks and considers the obstacles to a further strengthening.

The main conclusion is that, while much progress in strengthening the macroprudential orientation of regulatory and supervisory arrangements has been made, there is still considerable scope to take it further. Whether the glass is half full or half empty is very much in the eye of the beholder. At the same time, significant obstacles stand in the way; they are of an analytical, institutional and, above all, political economy nature. Chipping away at these obstacles is important if we wish to make further progress in ensuring lasting financial stability.

I. What is the macroprudential perspective?

As anyone familiar with the philosophy of language knows, the meaning of words is fundamentally ambiguous. While the word "macroprudential" is now quite common, just as with its close cousin, "systemic risk", it is hard to reach consensus on what it means, even though its key connotations are immediately recognisable.

What follows uses a specific characterisation that we have found quite useful lately at the BIS.[4] It defines "macroprudential" with the help of its antonym, "microprudential", and it does so in an intentionally stylised way. For, just as shades of grey are best appreciated when set against their two primitive components, black and white, so the macroprudential dimension of regulatory and supervisory policies is best appreciated if set against its microprudential counterpart. So defined, by analogy with black and white, the macro- and microprudential souls would normally coexist in the more natural shades of grey of regulatory and supervisory arrangements.

As defined here, the macro- and microprudential perspectives differ in terms of objectives, focus and characterisation of risk (Table 1).

[4] Previous statements of the distinction between the macro- and microprudential perspectives can be found in Crockett (2000) and Borio (2003).

Table 1
The macro- and microprudential perspectives compared

	Macroprudential	**Microprudential**
Proximate objective	limit financial system-wide distress	limit distress of individual institutions
Ultimate objective	avoid output (GDP) costs	consumer (investor/ depositor) protection
Characterisation of risk	(in part) endogenous	exogenous
Correlations and common exposures across institutions	important	irrelevant
Calibration of prudential controls	in terms of system-wide risk; top-down	in terms of risks of individual institutions; bottom-up

The ***objective*** of a macroprudential approach is to limit the risk of episodes of financial distress in so far as these produce significant losses in terms of the real output of the economy as a whole. That of the microprudential approach is to limit the risk of episodes of financial distress at individual institutions, regardless of their impact on the overall economy. So defined, the objective of the macroprudential approach is very much in the macroeconomic tradition. That of its microprudential counterpart is firmly rooted in microeconomics and best rationalised in terms of consumer (depositor or investor) protection.

The ***focus*** of the macroprudential approach is the financial system as a whole, that of its microprudential counterpart is the individual institution. Moving from a micro to a macroprudential orientation involves the same shift in perspective as that of an investor in an individual security who becomes an investor in a mutual fund, invested in a portfolio of securities. Just think of the financial system as a portfolio of securities, with each security representing a financial institution. A mutual fund investor cares only about the loss on the whole portfolio rather than caring equally and separately about that on each individual security. As a result, he looks at the risk profile of the whole portfolio rather than at the risk of each security separately. For him, the degree to which the returns on the securities move together (i.e., are "correlated") is crucial, as losses on some securities can be offset by gains on others. His approach is top-down. By contrast, the investors in individual securities care about their individual risks and are not concerned with correlations. Their approach is bottom-up.

Finally, what about the ***characterisation of risk***? From a macroprudential perspective risk depends on the collective behaviour of institutions – in technical terms, it is "endogenous". This is because, collectively, institutions can affect the prices of financial assets, the quantities transacted (e.g., borrowed and lent) and hence the strength of the economy itself. This, in turn, has powerful feed-back effects on the soundness of the institutions. By contrast, given its focus on individual institutions, a microprudential perspective ignores such feedbacks, i.e., it treats risk as "exogenous". Taken in isolation, individual institutions will generally have little impact on market prices or the economy as a whole.

A microprudentialist would argue that for a financial system to be sound it is *necessary* and *sufficient* that each individual institution is sound. A macroprudentialist would take issue with this. To him, it would not be necessary: the output costs of financial stress at individual institutions, or even groups of institutions, banks or otherwise, need not be large enough. More subtly, he would not regard it as sufficient either. This would depend on *how* soundness was pursued. In his view, a macroprudential approach would have a better chance of securing financial stability and, thereby, of making also individual institutions safer. The approach could help better to identify vulnerabilities and to calibrate the policy response. For instance, ignoring hidden common exposures across institutions to macroeconomic developments could lull supervisors into a false sense of security. And ignoring feedback effects could lead to inadequate policies. For example, forcing institutions to retrench in bad times could make sense if taken individually. But in the aggregate, if sufficiently widespread, it could exacerbate distress selling and/or a credit crunch, thereby possibly making financial distress worse.

Clearly, so defined, significant macroprudential elements have always been part of regulatory and supervisory arrangements. Examples include: traditional appeals to notions of "systemic" or system-wide risk as rationalisations for regulation and supervision; tailoring the intensity of supervision to the size and complexity of institutions, which may match, by design or incidentally, their systemic significance; and assessing concentration of exposures across institutions and vulnerabilities to common shocks, such as those associated with asset prices, sectoral, regional or macroeconomic developments.

At the same time, arguably microprudential elements have traditionally been far more prevalent. Prudential standards are generally calibrated with respect to the risks incurred by individual institutions, the hallmark of a microprudential approach. In other words, correlations of exposures are ignored. The widespread use of peer group analysis in assessing risk is micro too. The benchmark here is the average performance of institutions, regardless of what this implies in the aggregate. By design, the approach is helpful in identifying risky outliers, but not generalised overextension. And microprudential is also a reluctance to contemplate adjustments in standards or the intensity of supervision to take into account ("internalise") macroeconomic consequences. For instance, there were clear differences of opinion between the Federal Reserve and the Office of the Controller of the Currency in the United States during the "headwinds" of the early 1990s. At the time, the Fed was concerned about the implications for overall risk of a tightening of supervisory standards with respect to real estate exposures pursued by the other supervisory agency. It felt that the subsequent credit crunch could weaken markets and the economy further, actually making matters worse.

II. Why is the macroprudential perspective important?

As argued in more detail elsewhere (Borio (2003)), there are at least four reasons why strengthening the macroprudential perspective is important.

First, in some crucial respects, the macroprudential objective actually subsumes the rationale for its microprudential counterpart, best seen as depositor/investor protection. The output costs of financial instability can be very large and their incidence widely felt.

Even acknowledging measurement difficulties, studies indicate that the costs of banking crises can easily run into double digits of GDP. And the macroprudential objective is couched in terms of the size of the losses incurred by economic agents, regardless of which "hat" they happen to wear. To see this, note that even in those cases where depositor protection schemes may insulate depositors from direct losses, they cannot spare them the indirect, and more insidious, pain of widespread financial distress as citizens of a country.

Second, strengthening the macroprudential orientation holds out the promise of a better balance between market and official discipline, and hence of better economic performance. In particular, if the objective of supervisors is seen as preventing the failure of *each and all* the institutions for which they are responsible, regardless of the system-wide consequences, the risk is that the regulatory net becomes overly intrusive and protection excessive. This could stifle economic growth.

Third, and more subtly, the nature of financial instability is such that a strict microprudential approach is less likely to deliver a safe and sound financial system. In principle, a strict microprudential approach is best suited to deal with those systemic crises that result from problems that originate at an *individual* institution, owing to idiosyncratic factors, and then spread to others through the web of balance sheet interconnections and behavioural responses. Even here, though, a clear picture of those interconnections would be needed. Historically, however, the more costly episodes of widespread financial distress have arisen primarily through *common exposures* to macroeconomic risk factors across institutions, even in the absence of strong interconnections. In this case, many institutions are weakened simultaneously because of a downturn in asset prices and the economy more generally.

These episodes have highlighted the reinforcing interaction between the financial system and the real economy. Typically, there is a build up phase in which the financial system becomes overextended, as muted perceptions of risk, rising asset prices and increased lending ("leverage") feed economic growth. At some point, the process goes into reverse, revealing the underlying weaknesses that had been masked by the benign conditions. If the financial system has not built up sufficient cushions during the expansion, widespread financial strains can result. From this perspective, such occasional "pathological" developments are said to reflect the excessive "procyclicality" of the financial system – a term used to refer to the mutually reinforcing interaction between the real and financial sides of the economy (Borio et al. (2001), BIS (2001) and (2002)).

At least ex post, "financial cycles" of this kind can be detected behind many of the severe financial crises that have occurred in industrial and emerging market countries since at least the 1980s. These include several of the banking crises in Latin America in the 1980s and early 1990s, the crises in East Asia later in the decade, those in the Nordic countries in the late 1980s – early 1990s and the more prolonged one in Japan. Moreover, even if no major crisis broke out, countries such as the United States, the United Kingdom and Australia also experienced strains in their financial systems in the early 1990s following similar patterns.

Finally, structural changes in the characteristics of the financial system have put a further premium on the macroprudential perspective. One reason is that a liberalised financial environment may also be more vulnerable to the occasional episode of excessive

procyclicality (e.g., Borio and White (2004), Borio (2005)). Such an environment allows more room for the mutually reinforcing interactions between the financial system and the real economy, as financing constraints can be looser and incentives to take on risk stronger, owing to greater competitive pressures. Another reason is that major advances in market participants' ability to price and trade risks separately have made it easier to shift risks across different types of financial institution as well as between institutions and open markets while at the same time have intensified the links among them (Knight (2004a)). This makes it all the more important to take a holistic approach to the identification of vulnerabilities and the calibration of prudential instruments. For example, banks and insurance companies have been shifting risks between them through the use of derivatives, including credit derivatives. And just as financial institutions have increasingly come to depend on markets remaining liquid under stress to support their risk management, so markets have become increasingly dependent on financial institutions' market making and funding liquidity services for their smooth functioning (Borio (2004)).

III. How far has the macroprudential perspective gained ground?

Recent years have indeed seen a strengthening of the macroprudential orientation of regulatory and supervisory frameworks (BIS (2005)). Two catalysts appear to have given impetus to this trend. For one, the Asian financial crisis highlighted the strong linkages between system-wide financial sector vulnerabilities and macroeconomic performance. True, as noted earlier, previous crises had already exhibited similar characteristics. But it was the Asian episode which triggered a major shift of opinion and priorities, probably as a result of its geographical spread and intensity. In addition, the development of more risk-sensitive approaches to capital standards (Basel II) has put the spotlight on the implications of time-varying risk assessments for minimum capital, bank lending and the macroeconomy. As a consequence, the terms "macroprudential" and "procyclicality" have risen from virtual obscurity to become very familiar to policymakers, practitioners and academics alike.

At the same time, it is probably fair to say that the shift has been somewhat greater with respect to the monitoring of financial vulnerabilities than the calibration of policy tools. Consider each in turn.

Monitoring financial vulnerabilities

As regards the monitoring of financial vulnerabilities, it is possible to single out several developments that are fully consistent with a strengthening of the macroprudential orientation of regulatory and supervisory arrangements.

First, considerable analytical work has gone into seeking to develop formal early warning indicators of system-wide financial distress, such as banking crises. Research at the BIS has been no exception (Borio and Lowe (2002a) and (2004)). We have found that indicators of financial imbalances can help to predict system-wide banking distress and economic weakness over a horizon of 2 to 4 years ahead, based on information that should be available to policymakers at the time the assessments are made (i.e., in real-time). The indicators are inspired by the characteristics of financial cycles identified previously. They seek to identify

booms that hide within them the seeds of their subsequent destruction. In particular, they are based on measures of the *coexistence* of "excessive" asset price increases ("misalignments") with a limited capacity of the system to absorb the asset price reversal. Misalignments are simply captured by unusually large deviations of asset prices from trend, and the absorption capacity of the system by similar deviations in the ratio of private sector to GDP, with higher leverage implying a smaller cushion. Fitch Ratings (2005) has recently developed a methodology for the assessment of system-wide banking risk and hence for country ratings based on this philosophy. And these indicators can also help to improve risk management systems at the level of individual financial institutions (Lowe (2002) and Tarashev (2005)).

Second, even greater efforts have been devoted to developing so-called "macro-stress" tests (Sorge (2004)). These are analogous to the stress tests now routinely carried out by individual financial institutions to evaluate the risks hidden in their portfolios, but relate to the financial system as a whole or large sub-sets thereof, such as the banking sector. The precise methodologies vary substantially in sophistication and complexity, from simple sensitivity analyses to more complete scenarios. But the basic idea is always to evaluate the vulnerability of the financial strength of the corresponding institutions in the face of plausible but very testing circumstances, such as a major recession or an asset price collapse. In emerging market countries in particular, foreign currency and interest rate mismatches in the balance-sheets of the various sectors of the economy have received particular attention. At a national level, the Financial Sector Assessment Programmes (FSAPs) carried out jointly by the IMF and the World Bank have acted as an important catalyst for the development of such macro-stress tests, by encouraging the availability of the raw data (e.g., the so-called Macroprudential Indicators), the development of the methodologies and the implementation of concerted exercises (IMF (2005)).

Third, a number of national and international fora routinely carry out macroprudential monitoring exercises, blending quantitative and qualitative/judgemental elements. Nationally, central banks have taken the lead, as witnessed by the mushrooming of Financial Stability Reports. In some countries, such as Norway, these are carried out in close cooperation with supervisory authorities. Internationally, the Financial Stability Forum has been quite active and has encouraged the dialogue between different types of authority, by bringing together senior representatives of national and international prudential authorities, central banks, ministries of finance and international financial institutions. Similar monitoring exercises are also performed at the BIS by the Committee on the Global Financial System – a central bank body – and by international financial institutions, such as the IMF.

Finally, prudential authorities have carried out targeted exercises to form a better view of how risks are distributed across the financial system as a whole. An obvious example is the set of studies on the impact of credit risk transfer instruments, including under the aegis of the Joint Forum.

At the same time, despite these significant steps forward, all of this is still very much "work in progress". The quantitative analysis is in its infancy. The performance of early warning indicators is too heterogeneous and uneven. With a few exceptions, such as some of those noted above, they are not forward looking enough, acting more like coincident than leading indicators of distress, at least from the perspective of policymakers, who need sufficient lead

time to take measures. There is little information about the extent to which, even if successful in retrospect in capturing signs of impending distress, their performance will prove robust to the passage of time, as financial systems evolve further. For their part, macro-stress tests are very rudimentary compared to their micro counterparts, which address the risks in the portfolio of individual institutions. Linking macroeconomic developments formally to the performance of the financial system has proved difficult. And, above all, it has proved exceedingly hard to model in a meaningful way the feedback effects on asset prices, the real economic and hence the degree of financial stress arising from the response of the financial system to the original "shock"– the critical "endogenous" dimension of risk. Partly as a result, the horizons over which these "shocks" are assumed to play themselves out are generally too short and the results not sufficiently convincing.

The implication is that the output of these more quantitative exercises has so far typically lacked sufficient "bite". It is of course unrealistic to expect these exercises to provide more than a structured first pass at identifying potential vulnerabilities. They should at best be seen as the basis for a more rounded and multi-faceted qualitative judgement of the risks ahead. Even so, their preliminary nature has meant that they have arguably often failed to provide sufficient discipline on the assessment of vulnerabilities. The result has been an excessive tendency to "look at everything" without a good sense of "how" to look at everything, on the one hand, and leaving too much room for quasi-philosophical priors concerning the strength of the stabilising or destabilising nature of market forces to influence the final judgements, on the other. More work is clearly needed.

Calibrating policy tools

In assessing how far the macroprudential perspective has been gaining ground in the calibration of policy tools, it is worth distinguishing between the cross-sectional and the time dimensions. The cross-sectional dimension refers to the relative calibration of instruments across financial institutions/parts of the financial system in relation to the distribution of risks across the system *at a given point in time*. The time dimension refers to the calibration of instruments in relation to the evolution of system-wide risk *over time*. Here, the notion of procyclicality plays a key role.

The key principle in the ***cross-sectional dimension*** is to calibrate prudential standards with respect to the (marginal) contribution of a particular financial institution to the risk in the overall financial system. Recall the analogy with the portfolio of securities: it is not the risk of the individual security that matters but how far it adds to, or subtracts from, the risk in the overall portfolio.

There are indeed several examples of policies that are consistent with this principle. One is the broad trend, which in fact predates the gain in prominence of the macroprudential perspective, of having tighter supervision, and in some cases even more stringent quantitative standards, for larger, systemically-relevant institutions. Some authorities, for instance, may decide to insist on higher cushions above the calculated minimum capital requirements for institutions whose failure they deem to be of particular damage to the financial system as a whole. The Swiss authorities, among others, have tougher prudential standards for such institutions precisely on these grounds. A second example is represented by efforts to limit

the differences in prudential standards across sectors of the financial system, such as insurance and banking (Knight (2004b)). This is so at least to the extent that these efforts reflect a conscious attempt to limit regulatory arbitrage across different types of financial institution and as long as they remain cognisant of differences in the functions performed, such as the degree of involvement in critical system-wide tasks like payments and settlements.

Even so, the scope for a further strengthening of the macroprudential dimension is considerable. To my knowledge, there has been as yet no systematic attempt to calibrate standards based on correlations of exposures across financial institutions, except in so far as excessive concentrations may at times be penalised on an ad hoc basis (e.g., for lending to overexposed sectors, such as real estate (see below)). More generally, policy tools such as capital charges do not make a generalised explicit distinction between the risk specific to the given financial institution and its contribution to the risk of the system as a whole (in technical terms, between "idiosyncratic" and "systematic" risk). And a big unresolved question is how to treat capital markets in the overall framework.

The key principle in the ***time dimension*** is to increase financial system cushions in good times, as the financial imbalances and hence risk build up, so as to run them down, up to a point, in bad times, as the imbalances unwind. This would better align the cushions with the actual trajectory of risk. And by leaning against the procyclical forces of the financial system it could also help to reduce the size of the financial cycle and hence the risk of a disruptive unwinding in the first place. This is akin to buying insurance for a rainy day. And it extends to the prudential sphere a well-known principle in macroeconomics, such as the need to allow fiscal positions to tighten in good times and to weaken in bad times, while maintaining them neutral over the business cycle as a whole. This is what cushions and self-equilibrating mechanisms are all about.

Here, too, several developments have been quite consistent with a strengthening of the macroprudential perspective. While the issue had initially been outside the radar screen of supervisors, explicit adjustments were made to the new minimum capital standards framework for banks (Basel II) in order to address the risk of excessive procyclicality. The concern was that minimum standards would fall too much during expansions and rise too much during recessions, possibly undermining, or at least limiting, some of their beneficial effects on financial stability (Borio et al. (2001), Borio (2003) and Caruana (2004)). Interestingly, one such element includes the possibility of calibrating capital cushions in the light of the outcome of stress tests that assume a sudden deterioration in macroeconomic conditions. Similarly, the Spanish prudential authorities (the Bank of Spain) have taken the lead in introducing a system of dynamic provisioning for prudential purposes (e.g., Fernandez de Lis et al. (2001)). In this system, forward-looking provisions are systematically related to historical experience over business cycles as a whole, thereby preventing an excessive fall in good times. Finally, several authorities have made discretionary adjustments to prudential instruments with a view to addressing the build up or unwinding of financial imbalances. Examples include, for instance, a tightening of loan-to value ratios (e.g. Hong Kong, Korea, Malaysia, Thailand), capital requirements against real estate lending (India, Portugal, Norway) and overall exposures to specific sectors (some countries in Asia) as perceived financial imbalances built up. In at least one other case, it has involved relaxing them, at least

temporarily, to avoid vicious circles of falling asset prices and additional sales. In particular, in 2002 the UK FSA adjusted the stress test requirements for insurance companies to avoid destabilising sales of equities (FSA (2002)).

At the same time, there is still considerable reluctance to calibrate prudential instruments more systematically from a macroprudential perspective. Several obstacles have stood in the way of a further strengthening of this orientation. The expertise, power and will may be lacking.

Analytically, a number of outstanding issues remain. They concern the identification of vulnerabilities in good time and the calibration of the tools. As discussed above, in identifying vulnerabilities, despite the progress made, the technology and practice are still in their infancy. While comfort levels differ across national authorities, for many of them both macro-stress tests and leading indicators of distress still fall short of providing a degree of comfort sufficient to underpin discretionary policy responses. In calibrating the tools, there are questions concerning their effectiveness. These in part vary with the characteristics of the financial system, such as the degree of openness and the relative importance of banks and open capital markets, which influence both the scope of the authorities to use them and their bite (Borio and Shim (forthcoming)). Clearly, here there is a "catch 22": some of these questions cannot be resolved until the approach is actually put into practice, but questions about its effectiveness may inhibit its implementation.

Institutionally, often the alignment between control over instruments and goals is only imperfect. For instance, statistical provisioning can be seen as inconsistent with interpretations of current international accounting standards (Borio and Lowe (2001) and Borio and Tsatsaronis (2004)). It clearly helps if, as in Spain, the prudential authority is also in charge of interpreting and implementing those standards for the banking sector. But this is more the exception than the rule. More generally, many prudential authorities have strong depositor/investor protection elements in their mandates. These are not easily reconcilable with a macroprudential orientation and can make the use of the tools for this purpose rather difficult, both with regard to the willingness and expertise needed to use them. Sometimes legal obstacles may also stand in the way.

Finally, from a political economy perspective, the actions may face strong resistance on the part of regulated firms, the body politic and the public at large. Mandates are one reason. But, beyond this, there are broader cultural elements. On the one hand, it is important that there be strong backing for the notion that failure of individual institutions is not tantamount to failure by the supervisory authority. This is easy to state in principle, much harder to apply in practice. On the other hand, the recognition of the importance of a macroprudential perspective has to be broadened well beyond narrow policy circles, so as to generate sufficient acceptance for its day-to-day implementation. This is crucial since one of its hall-mark implications is the need to take tough measures in good times to prevent the emergence of problems. As we know from the experience with monetary and fiscal policy, taking away the punch-ball when the party gets going is not a particularly popular task. The proper incentives need to be hardwired institutionally (White (2006a)).

Conclusion

In all walks of life, balance is the key. Securing lasting financial stability is no exception. It calls for a proper balance between the microprudential and macroprudential dimensions of regulatory and supervisory arrangements. For a long time, the macroprudential dimension had been comparatively neglected; over the last few years it has gained ground. The shift has been substantial – no doubt it has gone further than many could ever have imagined at the start. The Norwegian authorities have been very much at the forefront of such a shift, possibly in part because they were the first to experience a major banking crisis in the late 1980s. The shift has gone furthest with respect to the awareness of the existence and of the importance of the dimension. Owing to analytical, institutional and political economy obstacles, it has been somewhat slower with respect to the identification of vulnerabilities and, above all, the calibration of policy instruments. Considerable room for a further strengthening exists. Looking forward, it is desirable that it be exploited further.

From a broader perspective, the shift in the orientation of prudential frameworks is part and parcel of adjustments in a wider set of policies needed to address the challenges raised by the major structural changes in the economic environment over the last couple of decades (Borio and Lowe (2002b), Borio and White (2004), White (2006b) and Borio (2006)). Arguably, financial liberalisation, the globalisation of the real economy and the establishment of credible anti-inflation regimes have jointly resulted in a landscape which is more vulnerable to the *occasional* build up of financial imbalances *in a context of low inflation*. Not just prudential frameworks, but also monetary and fiscal policies need to be adjusted to address this challenge more systematically. It is unrealistic to expect prudential authorities to address these issues on their own. Mutually supportive policies are called for. All this puts a premium on the cooperation between different types of policymaker. In particular, strengthening the ties between monetary and prudential authorities is essential. Major potential synergies exist, in terms of both know-how and coordination of policy actions.

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