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NPRECEDENTED actions by governments during the global economic crisis to shore up financial institutions deemed too big to fail underscore the critical role of large systemically important financial institutions in national economic development and in financial system stability.

These steps—which included government guarantees of bank debt, capital injections, and cleansing of bank balance sheets—were considered necessary because of fears that a failure of a systemically important institution would seriously damage the real economy, trigger a loss of confidence in the financial system, or both. Bailouts of large, systemically important firms have sparked debate about the proper regulatory, supervisory, and resolution framework for too-big-to-fail firms.

This article explores many of the complex issues and trade-offs policymakers must consider in evaluating reforms to the oversight of systemically important banks (SIBs). It also summarizes a range of practical solutions covering two critical dimensions of this debate: *crisis prevention* (better regulation and supervision of SIBs) and *resolution* (how best to support SIBs or allow them to fail). There is a broader debate, not addressed in this article, about whether to include nonbank financial firms within the definition of a systemically important institution.

## What to do?

In crafting policies to address too-big-tofail banks, policymakers must also consider moral hazard—that is, whether by rescuing troubled, systemically important banks they encourage their growth and remove some of the consequences of risky behavior (see box). But, given that the decision to save an institution may be a foregone conclusion if there is a likelihood of broader damage to the economy, the overarching questions then become how to develop measures to encourage SIBs' prudent behavior and how to formulate policies that hold SIBs and their stakeholders fully accountable, while minimizing the consequences of their failure on innocent bystanders.

All national authorities must develop their approach to SIB oversight within the context of their country-specific needs. Several large countries—in conjunction with international standard-setting bodies—have floated proposals. It will be a challenge to achieve international and domestic consensus on many elements. But there are common issues for policymakers and regulators in every jurisdiction:

- how to define an SIB;
- whether SIBs should be held to higher regulatory and supervisory standards than non-SIBs and, if so and recognizing the trade-offs they present, what those standards should be; and

Oversight of systemically important banks must be reevaluated

• whether policies can be developed that allow troubled SIBs to fail, but limit the effect of that failure on the real economy and financial stability.

# **Defining systemic institutions**

Authorities must develop a workable definition of a systemically important bank. Should the bank's status be based on the size of its assets or deposits, the complexity of its activities, its role as a counterparty in derivatives transactions, or some other measure? Moreover, it is likely that what constitutes a systemically important bank during normal times will change during times of stress. If that is the case, how do authorities choose which banks are subject to more stringent regulatory and supervisory requirements? At a minimum, policymakers should identify a core group of banks considered SIBs under any conceivable circumstances, apply higher regulatory and supervisory standards to them, and recognize the difficulty of identifying before a crisis smaller banking groups that may be viewed as systemically important during turbulent times.

# **Crisis prevention**

Authorities will have to adopt a comprehensive set of crisisprevention measures to better regulate and supervise SIBs. Among these measures are tighter capital and liquidity requirements, heightened risk-management standards, limits on risky activities, improved governance of SIBs by boards of directors, prudent bank compensation programs, and strengthened consolidated supervision of banking groups.

Authorities must develop more stringent capital and liquidity measures for SIBs. In the run-up to the crisis, reported capital and liquidity positions at SIBs appeared healthy because of rapid growth in high-risk activities, rising asset prices, and access to cheap market-based funding sources. Once the crisis hit, these cushions proved illusory as the financial consequences of SIBs' high-risk strategies became apparent. Therefore, more conservative capital and liquidity requirements for SIBs (compared with non-SIBs), as well as countercyclical capital measures, are needed to limit excessive growth during good times and allow for greater shock absorption during stressful times. A key challenge will be calibrating an appropriate level of minimum capital and liquidity requirements, given variations in accounting and loan-loss provisioning standards, operating environments, funding structures, and differences among countries regarding what constitutes a liquid asset. Lower leverage (that is, increased capital) and more liquid assets on SIB balance sheets will result in less bank lending and borrowing—an explicit tradeoff for a more stable financial system.

# The moral hazard worry

Governments have focused on preserving financial system stability and mitigating damage to the broader economy during the current financial crisis. They pushed aside traditional concerns about moral hazard—that is, whether by routinely propping up failing banks because of their size, authorities in effect encourage a systemically important bank (SIB) to take on greater risks, sowing the seeds of a bigger financial crisis, followed by ever larger bailouts.

But the moral hazard problem may be overblown. The eventual impact on risk-taking behavior of two main players in an SIB bailout—executive management and shareholders—may not differ significantly from the effect on the same players in a failed bank that is not considered systemically important. For the third important player—bank creditors—a more compelling case can be made to reduce moral hazard by treating them in a bailed-out SIB the same way they are treated in a failed nonsystemic bank. Nevertheless, it is questionable whether those creditors could realistically monitor and alter an SIB's future risk-taking behavior.

In a government bailout of an SIB, some members of management get sacked, and shareholders lose a significant portion of their investment's value because it is diluted by the amount the government invests to prop up the institution. For non-SIBs that are allowed to fail, all executives lose their jobs, and shareholder losses are permanent. Despite legitimate policy debate over whether these treatment disparities are warranted, the moral hazard question is whether these differences cause SIB management and shareholders to act more irresponsibly than their non-SIB counterparts. Because *executive management and shareholders* of bailed-out SIBs do share in varying degrees of pain, together with incalculable damage to their rep-

utation in the marketplace (particularly in the case of management), it does not appear that moral hazard plays a meaningful role in shaping SIBs' risk-taking behavior. Their prospective risk appetite is more likely to revolve around excessive focus on short-term profits and pressure from shareholders to maximize the stock price. These competitive pressures are endemic to a market economy and are *independent* of the moral hazard question.

Creditors (debt holders), on the other hand, are treated disproportionately better at SIBs than at non-SIBs. When a government rescues an SIB, creditors are not usually asked to share in any losses. Indeed, their credit quality position is often strengthened because of the government intervention. For a non-SIB that liquidates, creditors almost always experience significant losses. In addition, the creditors' main objective is to seek repayment of their outstanding credit extensions, which does not coincide with the profit and share-price maximization interests of management or shareholders. Therefore, policies to counter moral hazard are most relevant for, and should focus on, creditors.

Still, the degree to which creditor discipline could realistically alter the risk-taking behavior of SIBs is unclear. The global financial crisis has shown that individuals privy to proprietary and real-time information—the risk managers at banks, internal and external auditors, and regulators—could not constrain excessive risk taking at SIBs. Why would creditors—who would rely on publicly disclosed information—do better? This is not to say that policymakers should not attempt to create the proper incentives and policies to encourage such surveillance, but they also should be realistic about its uses and limitations.

Although higher capital and liquidity requirements provide buffers against unexpected events in times of stress, the first line of defense against financial instability is *strengthening the risk-management standards and practices of SIBs*. Risk management encompasses the people, processes, and systems an SIB employs to oversee its risk exposure. The stature and authority of the risk-management function must be elevated within each SIB, so that it is willing and able to rein in excessive risk taking, particularly during good times. Moreover, SIBs must be held to a higher standard than non-SIBs to ensure that SIBs' risk-management systems and underlying practices reflect their size, complexity, and role in the economy.

But stronger financial buffers and better risk management alone cannot prevent higher-risk activities from causing another systemic crisis. The global financial crisis has demonstrated that SIBs' excessive risk taking can be catastrophic and that there is no built-in safeguard to constrain such risk taking. As a result, *authorities should set percentage-of-capital limits on SIBs' high-risk activities*. It may be difficult to determine what constitutes high-risk activities and to assign them appropriate quantitative thresholds. Nevertheless, the development of hard limits is the only tangible way to reduce the threat to the financial system by "collective action" problems of SIBs—that is, that individual firms' quest for maximum profit and shareholder value leads to pressure on other banks to take on excessive risk.

A fundamental cause of the financial crisis was inadequate oversight by SIBs' boards of directors, given their failure to establish or enforce a suitable risk-tolerance threshold. Weak board supervision was driven by the lack of appropriate technical expertise and the part-time nature of board positions, which made it difficult to oversee an SIB's risk profile. So regulatory authorities must prescribe more stringent "fit and proper" criteria for boards of directors of SIBs. Authorities should require that all SIB directors be full-time and that the majority have the technical expertise needed to understand and oversee large, complex institutions.

A key board responsibility is to design compensation programs that reward longer-term performance and promote sound risk management. The financial crisis revealed that bank compensation practices encouraged excessive risk taking and rewarded short-term profits at the expense of longer-term viability. To address this deficiency, regulatory authorities should establish, and boards of directors adopt, prudent standards for bank compensation programs that require a significant portion of bonuses to be paid in shares that vest over time, link bonuses to performance targets and adherence to prudential principles, and permit bonuses only if supervisors consider a bank's capital ratios sufficient. Bonuses for traders must be based on realized, not unrealized mark-to-market, gains. Moreover, assessment of bank compensation programs should be part of supervisory authorities' ongoing oversight responsibilities of individual banks.

Ultimately, the introduction of more stringent regulations, stronger risk management, and better board oversight must be *underpinned by robust consolidated supervision*. Large

SIBs typically engage in many activities—banking, consumer finance, securities, insurance, asset management, and securitization, among others—at the bank itself, in its subsidiaries, and in sister companies under a parent-holding-company structure. Consolidated supervision focuses on assessing the risk profile at the group or holding company level—not at the level of the individual subsidiaries. The practice of consolidated supervision must be strengthened—regardless of whether it is conducted within a unified regulatory apparatus

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in which all financial sector watchdogs are under one roof or on a functional basis in which various activities such as banking, securities, or insurance are supervised by separate agencies. There must be a clear legal framework with enabling regulations, supporting supervisory methodologies, and appropriate technical capacity to assess the consolidated risk profiles of SIBs and to take early supervisory action.

## **Preparing for the worst**

A key element in overseeing large institutions is preparing for a "death" or "near-death experience" of an SIB. Authorities must have a plan that would allow them to determine whether to allow an SIB to fail and, if it does fail, how to minimize the damage to the real economy and the financial system as a whole.

Any plan must establish a mechanism to allow for orderly unwinding of a failed SIB. This involves authorizing a governmental body to take over a failed banking group temporarily and allowing operations to continue until it can be liquidated or restructured in an orderly manner and/or sold. To facilitate a slow unwinding, supervisory authorities must collect information on an SIB's organizational structure and maintain a current list of asset inventories and key counterparties at each legal entity within the group. An orderly unwinding would not bail out shareholders. Whenever the government considers a systemically important firm to be insolvent, the shareholders' stake should be eliminated. Moreover, key executive bank management members should be replaced with government-appointed officials (from the private sector). The governmental body should also have explicit authority to block the payment of contractual bonuses to senior officers of failed SIBs. A more difficult challenge is determining whether, to what extent, and how creditors and large depositors of failed SIBs should share in the losses.

There should be *explicit rules regarding who gets paid first* and the minimum losses to be shared by creditors—such as institutional investors and possibly large retail depositors not covered under a deposit guarantee—should SIB operations be temporarily taken over. Under this approach, moral hazard concerns would be mitigated, because market participants would be informed of the rules of the game in advance.

SIBs could be required to pay fees to a resolution fund, which would be used to offset some of the costs the government might incur in keeping a failed SIB operational. It is important that fees be assessed in advance, to ensure that all SIBs—not just survivors—pay into the fund. A prefunded arrangement would, moreover, eliminate the procyclical nature of requiring payment only after a failure, when other SIBs may need cash to shore up their capital base. Such fees would provide a disincentive to institutions contemplating whether to grow enough to be classified as systemically important.

If key officials are to exercise their resolution authority on SIBs, they must be able to do so without fear of being sued—whether by former owners, government watchdogs, market participants, or others. That means *decision makers must have clear legal protection*. Otherwise, regulators and supervisors might be reluctant to make critical judgments regarding SIBs—often under extremely tight time constraints and based on complex variables that do not provide clear-cut answers.

Authorities should also rethink their mind-set that some banks may be too big to fail. The underlying philosophy should be that although some banks may be too big to liquidate immediately, no bank is too big to fail. This subtle philosophical shift could lead to an approach that accepts failure and its consequences—such as elimination of shareholders' interest and reduced value of creditors' stake—while continuing to focus on systemic and real-sector implications.

#### **Lessons learned**

One of the most sobering lessons of the financial crisis is the degree to which the safety and soundness of the global banking system hinged on the judgment of a few SIBs and their overseers (supervisors) and the lack of explicit regulatory backstops to limit excessive risk taking.

The intellectual justification for construction of regulatory policies and supervisory practices that benefited SIBs far more than any other class of banks was premised on the belief in the reliability of SIBs' risk models and "sound risk management," the practice of risk-based supervision at regulatory authorities, and market discipline. But the central role of SIBs in the global financial crisis suggests that their perceived strengths—such as economies of scale, access to global wholesale funding, product innovation, and application of sophisticated risk-management practices—were, in reality, the main cause of systemic risk during times of stress.

A related issue is whether the benefits of SIBs outweigh the costs society must bear in the event of their failure; for example, taxpayer support, significant credit contraction, and financial instability. As long as SIBs exist, a long-term solution to the too-big-to-fail problem warrants formulation of intrusive and more conservative regulatory constraints, combined with supervisors' greater willingness and ability to take early remedial action under a robust system of consolidated supervision. These preventive measures must be augmented with a credible insolvency regime that imposes market discipline on management, shareholders, and creditors of failed SIBs, if the "too big to fail" doctrine is to be permanently removed from our vocabulary, as it should be.

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