

# Should Regulators Reveal Information About Banks?

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egulators collect and produce information about banks. This information helps regulators monitor the safety and soundness of the banking system, and it also helps policymakers preserve financial stability. A key issue is whether this information should be made public and, if so, to what extent. In this article, we will explore some of the tradeoffs involved.

What information do regulators collect? Banks are required to file comprehensive quarterly reports, such as balance sheets, income statements, and derivative and off-balance-sheet items. Regulators also maintain large examination staffs that function as external auditors, while large banks are subject to continuous on-site examinations. These examinations are a key input into banks' so-called CAMELS scores.<sup>1</sup> Another way that regulators assess the soundness of banks is to conduct stress tests to evaluate how banks would fare under extreme scenarios. Stress tests are mandated by the Dodd-Frank Wall Street Reform and Consumer Protection Act as part of the regulatory reform following the financial

<sup>1</sup> CAMELS stands for capital adequacy, asset quality, management, earnings, liquidity, and sensitivity to market risk. Banks receive CAMELS ratings of 1 to 5, with 1 being the strongest. In addition to the bank's overall rating, ratings are assigned for each component. Banks rated 3 or lower are subject to closer scrutiny, and those rated 4 or 5 may be required to impose stronger controls on loan quality or to raise new capital.

crisis. Currently, CAMELS ratings are released only to the top management of the bank, not to the public. When the Federal Reserve conducted stress tests in 2009, it disclosed bank-level results, such as projected losses under an extreme stress scenario. But when the Fed conducted stress tests two years later, it disclosed less detail.<sup>3</sup>

An important question is whether revealing more of the information regulators collect on banks would help regulators come closer to meeting their goal of preserving the safety and soundness of the financial system.

## PROS AND CONS OF DISCLOSURE

A widely used argument in favor of disclosure is that it helps discipline banks. The idea is that more information allows investors to better distinguish between risky banks and less risky banks. This allows investors to re-

<sup>2</sup> For more details about stress tests conducted in the U.S. and Europe and what was disclosed, read the article by Til Schuermann.

ward banks according to their actions. Banks that engage in activities that are considered less risky should be able to raise money at a lower cost, while banks that engage in riskier activities will find it harder to raise money, or they will need to borrow at higher interest rates. This may induce banks not to take too much risk to begin with.

More generally, the argument in favor of disclosure is that it leads to more informative market prices — that is, prices that reflect the bank's fundamentals (such as profits and risks) more accurately. Examples of such market prices are a bank's stock price or the price of its debt. The benefit of more informative prices is that a bank is made accountable for its actions. Another benefit is that the regulator can learn from prices. Market prices are helpful, since they aggregate the views of many private investors who carry out research about the bank's risk, profitability, etc. The regulator can use these prices as another source of information to help guide its regulatory decisions.

While the arguments above may sound plausible at first, they are far from being obviously true. One problem is that they do not take into account the fact that disclosure may reduce the regulator's ability to obtain information in the first place. Disclosure may also reduce the incentive of market participants to produce information on their own and trade based on it. In this case, market prices may become less informative and less useful for the regulator. Another problem is that the argument implicitly assumes that it is better that market participants know more. However, as I discuss below, this is not necessarily true.



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## THE ABILITY TO EXTRACT INFORMATION FROM BANKS

One of the arguments against disclosing information such as CAMELS ratings is that if the regulator discloses to the market information that it receives from banks, banks will be less willing to cooperate with on-site examiners; therefore, the regulator will find it harder to collect information. Banks may be reluctant to reveal bad information, such as low profits, for fear of being penalized by the market by, say, higher borrowing costs or lower prices on the banks' stocks.

The underlying assumption here is that banks are worried about the consequences of revealing bad information to the market, but they are not worried, or are less worried, about the consequences of revealing bad information to the regulator. While this assumption may not always be true, it is plausible in some cases. Consider a bank that faces temporary financial problems. The bank may not want market participants to know for fear they will make it harder for the bank to borrow or even bet against it by selling its stock. The regulator, by contrast, might help. The bank may be able to obtain a loan from the regulator through a program called the discount window. In this case, the bank would not like to reveal bad news to the market but would not mind revealing bad news to the regulator.

However, the example above relies on another assumption, namely that the market cannot observe the regulator's actions in helping the bank; for example, the market does not know that the bank obtained a loan through the discount window. Whether this assumption is reasonable is arguable. The Fed publishes national aggregate data on borrowing from the discount window on a weekly basis. While the Fed does not publish the names of individual banks, some economists have argued that the market might be able

to infer which banks have borrowed, so there can be a stigma attached to borrowing from the Fed.<sup>3</sup> This stigma may reduce banks' willingness to borrow through the discount window. So, if a bank cannot be completely sure that its interactions with the regulator will not be detected by the market, the bank might be reluctant to interact with the regulator in the first place.<sup>4</sup>

To conclude, under some assumptions, disclosing information may reduce banks' incentives to reveal

information to the regulator. This, in turn, may reduce the regulator's ability to collect information.<sup>5</sup>

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**Partial disclosure may elicit more information from banks.** The issue so far has been whether "to disclose or not to disclose." More generally, it might be best for the regulator to disclose some information, but not everything. In a theoretical model, I illustrate this point. In particular, I show that under some conditions, to be able to extract information from

<sup>3</sup> For a discussion of this issue and a summary of related literature, see the paper by Huberto Ennis and John Weinberg.

<sup>4</sup> Under Dodd-Frank, regulators are required to disclose the identities of borrowers at the discount window with a two-year lag. This may be viewed as a form of partial information disclosure.

<sup>5</sup> For a formal model that illustrates this point, read the article by Edward Prescott. This article also discusses the possibility that the regulator conducts audits and imposes penalties when it detects that the bank lied. Since these audits may be costly in the sense that they require a lot of resources, the regulator may prefer to rely more on banks' cooperation and less on audits and penalties.

banks, the regulator should reveal *partial* information.<sup>6</sup>

In my model, the regulator needs banks' cooperation in order to extract information about complex transactions that banks enter into, such as credit default swaps. These swaps are essentially insurance contracts under which the seller of the swap agrees to compensate the buyer if the buyer loses money on a loan to a third party. In many cases, the seller may be tempted to sell more insurance contracts than

it can actually afford to pay because the probability that the third party will default and the seller will actually have to pay is, or is believed to be, very low. This was one of the problems during the financial crisis (think, for example, of AIG) and has led regulators to work toward the establishment of a clearing-house for credit default swaps. The idea is that if all contracts are registered in a central place, it should be easier for the regulator to monitor and ensure that banks and other financial institutions do not create liabilities that they cannot afford to pay.<sup>7</sup>

The issue, then, is whether banks will cooperate; that is, will banks register all their trades through the clearing-house and tell the regulator about all the contracts they enter into?

In my paper, I show that under some conditions, banks will indeed report all their transactions to the regu-

<sup>6</sup> See Leitner (2012).

<sup>7</sup> See Cyril Monnet's *Business Review* article for other arguments in favor of a central clearing-house.

lator. In these cases, whenever a bank enters into a contract, the bank voluntarily reports the contract terms and counterparty's identity to the regulator, and hence the regulator can keep track of each bank's total positions. Why does a bank voluntarily report every trade? Because if a bank does not report a trade, the regulator loses count of the counterparty's positions. This hurts any bank that doesn't report because its counterparty can now sell too many contracts on which the counterparty will ultimately default. In other words, banks fully cooperate with the regulator to ensure that their counterparties do not default.

Interestingly, to be able to extract information from banks, the regulator should not disclose all the information that it obtains, but it should reveal some information. The regulator should set a limit on the number of insurance contracts that a bank can sell — a "position limit" — and reveal only whether a bank has reached its limit. The position limit depends on the bank's financial strength; therefore, stronger banks obtain a higher position limit.

The reason the regulator should reveal whether a bank has reached its limit is straightforward: The regulator wants to make sure that no bank can sell too many insurance contracts.

But why shouldn't the regulator reveal the exact position of the bank? This is a little trickier. Realistically, reporting trades to the regulator involves some cost for the bank, so a bank will report its trades only if its counterparties would otherwise enter into a large number of contracts and default. The risk of its counterparty defaulting is the stick that drives each bank to report its trades. Thus, the regulator's disclosure policy must permit a bank to enter into lots of contracts if its counterparty *does not* report the trade. In some cases, the disclosure policy must even permit a bank to enter into more

contracts than the bank actually enters into in equilibrium. But this is possible only if the regulator does not reveal the total position of each bank.<sup>8</sup>

To conclude, partial disclosure can facilitate banks' incentives to disclose information to regulators in situations in which the bank's report contains information about both its own risk and its counterparties' risks. I will discuss additional reasons for partial disclosure further on.

As an important caveat, note that we are dealing here with theoretical models. While these models may provide useful insights to clarify our thinking, they clearly cannot capture all aspects of the real world. Hence, one should be cautious before drawing hard conclusions about the design of regulatory policy in the real world.

### INVESTORS' INCENTIVES TO PRODUCE INFORMATION

One of the concerns about information disclosure is that it might reduce the incentives of private investors to acquire information and trade based on it. This, in turn, might undermine market discipline. It may also limit the regulator's ability to learn from market prices.

Philip Bond and Itay Goldstein examine this issue in a theoretical model. In their model, the regulator intervenes in financial markets by taking actions such as closing weak banks or alternatively providing temporary support. The regulator's action depends on the regulator's views — for example, whether it thinks that forbearance for banks will help achieve financial stability. The regulator's action also depends on information that the regulator has when deciding on an action.

<sup>8</sup> If the regulator reveals a counterparty's actual position, the counterparty will not be able to reach its maximum position limit. As it nears its limit, other banks will conclude it will default on all its contracts, and so they will not enter into additional contracts with it.

The regulator uses two sources of information. The first source is the regulator's own information; that is, information that the regulator collects and produces on its own by, say, conducting stress tests. The second source is information that the regulator obtains by looking at market prices, e.g., the price of the bank's stock, prices of credit default swaps, etc. As I noted earlier, these market prices are a useful source of information because they aggregate the views of many investors who carry out research about the bank's fundamentals.

One of the points that the authors make is that when the regulator discloses its information, it may reduce the incentives of investors to produce information on their own; this may reduce the regulator's ability to learn from prices. This is especially true when the regulator reveals information about matters that investors are also researching, such as the profitability of an individual bank. The idea is that an investor has an incentive to spend time and resources on analyzing a bank only if he expects that by doing so he will make a bigger profit. But if everyone has the same information, or similar information, the profits from trading based on such information are reduced.

However, the authors also point to an opposite effect. This effect is powerful when the regulator reveals information about matters that investors can't research, such as more detail about the regulator's own policy governing intervention. The idea is that by revealing this type of information, the regulator reduces the uncertainty that investors face. But then investors may be willing to trade more, and when they trade more, they also produce more information.

To summarize, the model above suggests that disclosing information about issues that investors are also researching may induce investors to ac-

quire less information on their own, but disclosing information about matters that investors cannot research may spur them on to produce more information.

## INVESTORS MAY OVERREACT TO PUBLIC INFORMATION

Another concern is that market participants may overreact to the public release of information by the regulator. When the regulator reveals bad information about banks, market participants may panic and ignore other pieces of information, even though these pieces of information indicate that things are not so bad.

This issue was raised in an influential paper by Stephen Morris and Hyun Shin, who examine a market in which investors want to act like other investors. I illustrate their point in the context of uninsured depositors who decide whether to keep their money in a bank. Uninsured depositors care about two things: the banks' fundamentals (such as profits or portfolio performance) and the behavior of other depositors. If all other depositors are engaged in a run on the bank (withdrawing their money all at once), an uninsured depositor will not want to be the only one keeping his money at the bank, because the bank will go bankrupt. To pay all its depositors, the bank will need to sell its long-term assets. But since this sale will typically be at fire-sale prices (i.e., below what the assets are truly worth), the bank will not be able to raise sufficient funds to pay all depositors. So if all other depositors try to withdraw their money, an uninsured depositor will try to be the first in line so that he can get at least some of his money back. In other words, an uninsured depositor acts based not only on his own information and views about the bank's fundamentals but also based on what he thinks other depositors will do. This is one example in which investors want to act like other investors.<sup>9</sup>

Public disclosure of regulatory information regarding banks' fundamentals may induce investors to put too much emphasis on this information and ignore or put too little emphasis on their own information. The reason is that since all depositors use the same public information as one of the ingredients in their decision-making, public disclosure helps investors guess what other investors will do. This may lead investors to overreact to public information.<sup>10</sup>

So even if the regulator is not much more well informed than private investors, these investors may end up acting on the regulator's announcement. Depositors may run on a bank in response to bad news from the regulator even when their own information about the bank's fundamental health is not so dire. This is a bad outcome from the point of view of investors, and it also undermines market discipline because it breaks the link between the bank's financial health and whether it is punished. Morris and Shin conclude that investors will benefit from the regulator's releasing information only if the regulator's information is very precise.<sup>11</sup>

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<sup>9</sup> This assumption is very plausible in financial markets. Following Keynes, economists refer to it as a "beauty contest" motive. More generally, this is a type of "strategic complementarity." George-Marios Angeletos and Alessandro Pavan show that disclosure is undesirable in a fairly wide class of models with strategic complementarities.

<sup>10</sup> Note that in the previous section, we discussed a situation in which public information may reduce investors' incentives to produce information and then trade based on that information. Here we show that even if investors can produce information without any effort, they may put less emphasis on it.

<sup>11</sup> Itay Goldstein and Haresh Sapra discuss some empirical evidence that supports this theory. They also suggest some implications for disclosure of stress test results. For example, they suggest that disclosing aggregate results rather than individual bank results may reduce the destabilizing effect of information; however, this may come at a cost of less market discipline at the individual bank level.

## INFORMATION DISCLOSURE AND RISK-SHARING

Until now, we have focused on the effect of disclosure on the regulator's ability to collect information and on private investors' incentives to produce information or to trade based on the information they have. Next, we discuss the effects of disclosure on facilitating trade under severely stressed conditions. As the financial crisis demonstrated, in times of serious financial stress, trading among banks may break down. Information disclosure may play a role in thawing out frozen markets.<sup>12</sup>

In normal times, banks trade with one another for various reasons, one of which is to share risk. For example, suppose that a bank will suffer a big loss if the value of its assets falls below some critical level, say, \$100. This is one way to capture the idea that when the value of a bank's assets is too low, the bank is less likely to honor its obligations to its creditors and hence may find it more difficult to raise money to make profitable loans to households and businesses. Suppose that, depending on the financial conditions of the bank, the future value of the bank's assets will be either \$140 or \$80, and that, taking this into account, investors are willing to pay \$110 to purchase the bank's assets today.<sup>13</sup> Then the bank can protect itself against the possibility that the value of its assets falls below \$100 by selling its assets at the current market price.<sup>14</sup>

This type of insurance works during normal times but may not work

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<sup>12</sup> The discussion below is based on a working paper that Itay Goldstein and I wrote.

<sup>13</sup> This happens, for example, if each future scenario has equal probability, investors are risk-neutral, and the risk-free rate is 0 percent.

<sup>14</sup> As noted below, the idea that a bank sells its assets to reduce risk is a simplification to capture the idea that, in reality, banks may enter into more complicated risk-sharing agreements and insurance contracts.

during bad times. Suppose that during bad times there is a 50 percent chance that the bank is “strong” and the fair value of its assets is \$110, just as in normal times, but there is a 50 percent chance that the bank is “weak” and the fair value of its assets is only \$60. But even for a weak bank there is a chance that the future value of the assets will be more than \$100; it can be either 0 or \$120. If the bank and other market participants are uncertain whether the bank is weak or strong, the market price will be based on the average fair value of assets of weak and strong banks; that is,  $0.5 \times 110 + 0.5 \times 60 = \$85$ . But since this market value is less than \$100, a bank that sells its assets will surely suffer a loss, as it will surely have less than \$100. So when market participants cannot distinguish between weak and strong banks, a bank cannot protect itself against a fall in the value of its assets. The bank is better off keeping its assets, hoping that their value will rise above \$100. Hence, no bank sells its assets. In other words, the market breaks down.<sup>15</sup>

In reality, banks engage in many types of risk-sharing agreements or insurance contracts that are more complicated than the type of insurance in the example above. For instance, it may be the case that when some banks face cash-flow shortages, other banks have extra cash, and vice versa; in this case, banks can create

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<sup>15</sup> Note that I illustrate that the market can break down even when there are no issues of asymmetric information; that is, when banks don't know more than other market participants about their own financial condition. It is easy to see that the market will also break down when each bank has private information as to whether it is weak or strong. Strong banks will clearly not sell at \$85, which reflects the average of both strong and weak banks. However, if only weak banks sell, the price would be \$60. In that case, the weak banks are better off keeping their assets, hoping that future values will turn out to be more than \$100.

financial arrangements so that banks with extra cash help banks that need cash.<sup>16</sup> But the ideas above remain. These types of agreements can work only during normal times when banks view the banking system as a whole to be strong. If instead the average value of a bank is below the critical level, or if there is insufficient liquidity in the banking system to overcome the cash-flow shortages of all banks, the arrangements above break down.<sup>17</sup>

**During normal times, it is better not to disclose information so that all banks, not just the strong ones, can insure against a fall in the value of their assets.**

**Full disclosure will thaw markets.** Suppose that by conducting stress tests, the regulator can learn which banks are weak and which banks are strong. To achieve financial stability, the regulator would like to minimize expected losses in the banking system. In our example, this can be done by ensuring that asset values remain above the critical level for as many banks as possible.

Suppose first that the regulator does not disclose any information. As we saw above, in this case the market price is based on the average of weak and strong banks, and during bad times this leads to a market freeze in which no bank can insure itself against a fall in the value of its assets. Now suppose that the regulator discloses its information so that all market participants can distinguish between weak banks and strong banks. The outcome is that weak banks will not sell their assets, but strong banks will. For a

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<sup>16</sup> For a formal model, see the seminal paper by Franklin Allen and Douglas Gale.

<sup>17</sup> For a formal model that illustrates this point, see my paper on financial networks.

weak bank, the market will offer to buy the assets for \$60, but because this is less than the critical level, the weak bank is better off just keeping its assets, hoping that the future value will rise above \$100. Strong banks will be able to sell their assets for \$110, just as they could in normal times. Therefore, strong banks will be able to guarantee that the value of their assets does not fall below the critical level, but weak banks will not. Yet, this outcome is an

improvement over the case in which the regulator does not disclose any information.

So, the example above suggests that during bad times, disclosing information is preferable to not disclosing it. However, during normal times, it is better not to disclose information so that all banks, not just the strong ones, can insure against a fall in the value of their assets.<sup>18</sup>

**Partial disclosure can yield even better results.** Interestingly, during bad times the regulator can reduce expected losses in the banking system even further by revealing only partial information. In this case, some of the weak banks can also insure against a fall in the value of their assets.

The regulator can give each bank one of two scores — high or low — with all the strong banks obtaining the high score but some of the weak

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<sup>18</sup> Matthieu Bouvard, Pierre Chaigneau, and Adolfo de Motta reach a similar conclusion in a different context. They show that during normal times disclosing information is undesirable because it can lead to bank runs, but during crises, disclosing information is desirable because it can prevent some runs.

banks also obtaining the high score.<sup>19</sup> The idea is to assign scores such that, on average, the value of assets of banks receiving a high score is at least \$100. Then each bank receiving a high score can sell its assets for more than \$100 and protect itself against a fall in the value of its assets. This is a better outcome than that which is obtained under full disclosure, because under full disclosure only the strong banks can guarantee that their values are above the critical level; with partial disclosure, all strong banks, but also some of the weak banks, can guarantee that.<sup>20</sup> Since the strong banks receive less than the full expected value of their assets, they are effectively cross-subsidizing the weak banks that receive high scores.

Suppose that there are 10 strong banks and 10 weak banks and that the regulator gives a high score to all 10 strong banks as well as to two of the weak banks; the remaining eight banks receive a low score. Then for banks that receive a high score, the average value of the assets is  $(10 \times 110 + 2 \times 60) \div 12 = \$101.67$ , which is more than the critical level. Therefore, by selling their assets, banks that obtain a high score can protect themselves against a fall in the future value of their assets. The table summarizes the results.

<sup>19</sup> The idea that all weak banks are exactly the same is a simplification. In reality, weak banks are typically not identical, and the regulator will need to select the weak banks that receive a high score according to some predetermined rule. Itay Goldstein and I discuss this rule.

<sup>20</sup> Note that while the regulator does not provide all the information it has, the regulator does not lie. Rather, the regulator follows a predetermined rule, and everyone knows what the rule is. Also note that a high score does not necessarily mean that the bank is strong or that the future value of the assets that the bank sells will definitely be high. It only means that, on average, the value of assets of banks that receive a high score is more than some cutoff (in our example, the cutoff is \$100).

More generally, the regulator faces a trade-off: Disclosing some information may be necessary to prevent a market breakdown. But revealing too much information destroys risk-sharing opportunities for the weak banks.<sup>21</sup> So, given this trade-off, how can the regulator minimize losses in the banking system?

In our working paper, Itay Goldstein and I provide a formal theoretical model to analyze this issue. We show that during normal times, it is optimal not to disclose anything, but during bad times, the best policy is to disclose *partial* information. We also discuss what regulators should actually disclose to minimize expected losses in the banking system. We show that in some cases, it is best that the regulator gives all banks one of two scores: high or low. All strong banks obtain the high score, but some of the weak banks also do, so that on average, banks that obtain the high score have assets whose values are just at the critical level.<sup>22</sup> We also show that in other cases the optimal disclosure rule does

<sup>21</sup> The latter relates to what economists refer to as the Hirshleifer effect. See the seminal paper by Jack Hirshleifer.

not take such a simple form and may involve more than two scores. This can happen if the information that the regulator has about a bank is already known to the bank but not to other market participants.

## CONCLUSION

There are several potential pros and cons of information disclosure. Revealing information can help enforce market discipline and facilitate trade. However, revealing too much information may reduce trading opportunities for the weaker banks. Revealing information may also reduce investors' incentives to produce information or to use information they obtain from other sources. Disclosure may also reduce the regulator's ability to collect information in the first place or to learn from market prices.

In some special cases, the best policy may involve partial disclosure of the information collected by the regulator. For example, if the regulator wants to ensure that banks do not sell too many insurance contracts, it might

<sup>22</sup> This type of disclosure is in the spirit of the Bayesian persuasion solution proposed by Emir Kamenica and Matthew Gentzkow.

**TABLE 1**

### Effect of Disclosure During Bad Times

		Strong banks	Weak banks
<b>Number of banks</b>		10	10
<b>Future asset value</b>		\$80 or \$140	\$0 or \$120
<b>Current fair value of asset</b> (Bank can avoid loss only if value $\geq$ \$100.)	<i>Full disclosure</i>	\$110	\$60
	<i>No disclosure</i>	\$85	\$85
	<i>Partial disclosure*</i>	\$102	\$102 (high score) \$60 (low score)

\* Under partial disclosure, all strong banks plus two weak banks receive high scores; the remaining weak banks receive low scores. Values are rounded.

## Other Issues Related to Information Disclosure

Some other effects of disclosure are worth mentioning:

While disclosing information may help discipline banks, it may also lead to “window dressing,” meaning that banks may take actions that make them look good in the short term but reduce their values in the long term. To learn more about this issue in the context of the disclosure of results from stress tests, read the article by Itay Goldstein and Haresh Sagra.

Disclosure can also impose discipline on the regulator: It allows the regulator to commit to a predetermined rule regarding how to act based on, say, stress test results. It is worth noting that such a commitment has both pros and cons. By committing itself, the regulator can reduce uncertainty but lose the flexibility to act under unexpected circumstances.<sup>a</sup>

Finally, note that we have focused on information disclosure by the regulator rather than by banks themselves. The Dodd-Frank Act requires not only the regulator to conduct stress tests; it also requires systemically important financial firms to conduct such tests and publish a summary of the results. Interestingly, some of the insights that we developed in this article also apply to disclosure by banks. For example, we showed that disclosing too much information may destroy risk-sharing opportunities. For this effect to occur, it does not matter whether the regulator or the bank discloses the information.

Hence, the discussion in this article suggests that the regulator might want to consider restricting banks from disclosing too much detail about the results of their own stress tests. Alternatively, the regulator might not want to certify the results. To learn about other aspects that relate to disclosure by banks, read the *Business Review* article by Mitchell Berlin.


<sup>a</sup> The paper by Alan Morrison and Lucy White and the paper by Joel Shapiro and David Skeic provide theoretical models to examine how reputational concerns may affect the regulator’s actions and its disclosure policy.

be best to disclose whether a bank has reached some previously announced position limit, but without disclosing the bank’s actual position. Or if the regulator is concerned about the stability of the financial system and would like to minimize aggregate losses in the banking system, the best policy might involve disclosing whether a bank has obtained a high score or a low score. However, a high score does not necessarily mean that a bank is strong; it only means that, *on average*,

the value of assets of banks receiving a high score is above some previously announced level.

Note that determining the best regulatory disclosure policy is a complicated matter. This article has focused on only some aspects, leaving out other prominent concerns. See the accompanying discussion, *Other Issues Related to Information Disclosure*.

Likewise, it is crucial to keep in mind that this discussion has been based on using theoretical models,

which examine simplified pictures of the world to clarify our thinking. While these models provide a lot of useful insights — in particular, the models often alert us to matters that were not immediately obvious — at this point there is no consensus about the correct answers. Hence, one should be cautious before drawing hard conclusions about the design of regulatory policy in the real world. 

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