Public Policy Brief

REFORMING DEPOSIT INSURANCE

The Case to Replace FDIC Protection with Self-Insurance

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The Federal Deposit Insurance Corporation (FDIC) currently insures bank deposit balances up to $100,000. According to some observers, statutory protection creates moral-hazard problems for insurers because it allows banks to engage in risky activities. As an example, moral hazard was a key contributor to huge losses suffered when thrift institutions failed during the 1980s.[1]

This brief outlines a plan to reduce the risk of government losses by replacing insured deposits with uninsured deposits and eliminating some of the costs of deposit insurance. Konstas proposes a "self-insured" (SI) depositor system that places an intermediary between the lender (saver) and borrower (bank) in the credit-flow chain. The FDIC would guarantee saver loans and allow the intermediary to borrow at the risk-free interest rate if the intermediary's bank deposit is statutorily defined outside the realm of FDIC insurance. The risk is therefore transferred to depositors (intermediaries), thus creating incentives for depositors to earn a rate of return at least equal to the cost of borrowing plus a risk premium based on the risk profile of banks.

HIGHLIGHTS

Introduction

"Moral hazard" is the tendency of those with insurance to take less care and put forth less effort to avoid risks than they would if they had no insurance. This brief looks at whether the moral-hazard malady may not in fact reflect the inherently destabilizing effect of deposit insurance protection—an effect that can be countered only if the protection itself is removed or drastically reduced.

There are two kinds of deposit protection—statutory and implicit. Statutory protection occurs when the FDIC insures deposit balances up to a certain amount, currently $100,000. Implicit protection occurs when regulators resolve bank failures at no loss to any depositor, and when banks become insolvent but are not allowed to fail. The Federal Deposit Insurance Corporation Improvement Act (FDICIA) of 1991 attempted to limit this type of protection.[2]

The argument for removing implicit deposit protection is that if depositors consistently suffer losses during failures, they will become sensitive to the actions taken by their depositories and will require premiums according to risk. Such an outcome would dull banks' incentives for undue risk taking because higher risk would translate into higher premiums for uninsured funds.

The Federal Credit-Flow Chain

There are two types of federal credit-assistance—direct loans and loan guarantees. In terms of risk exposure and budgetary effects, there is no difference whether the government offers a direct loan or guarantees a loan from another party (e.g., a bank). But the impact on the national debt of the two types of assistance is different. Under direct loans, the national debt would rise by both the net cost amount and the amount of U.S. Treasury borrowing that is necessary to finance the direct loan; whereas the debt would rise by the net cost figure only with guarantees. Furthermore, there is a cost disparity between funds that the government provides and funds that it merely guarantees.

The government borrows funds using the central financing mechanism of the U.S. Treasury; i.e., it raises funds in large amounts at a time, in highly liquid securities, and totally on a risk-free basis, thus ensuring that the needed funds are raised at the lowest cost possible. In contrast, banking institutions raise funds by issuing types of debt obligations that vary in size, risk, and marketability. As a result, the cost of funds to institutions making guaranteed loans is significantly higher than the gov-

ernment's cost of funds in making direct loans. For the borrower, this difference in cost of funds means lower costs under direct loans than under loan guarantees. To minimize the discrepancy, the government has instituted central financing mechanisms that copy the model of the Treasury for most loan-guarantee programs under its auspices (e.g., in the case of student loans, the central mechanism is the Student Loan Marketing Association [Sallie Mae]).

Federal deposit insurance is a loan guarantee program,[3] so only the net disbursements to fund losses and purchase assets of failed banks are recorded as federal outlays and entered in the national debt total. The government assumes as much risk by insuring deposits (loans) to banks as it would by making loans directly to banks out of its own funds. However, unlike other loan guarantee programs, deposit insurance has not devised a central financing mechanism to enable banks to raise funds more economically.

The current system of deposit insurance is depicted in panel A, Figure 1. The government, via its agency, the FDIC, guarantees loans that savers (depositors) make to banks. Since government assumes all the default risk, the bank gets to borrow money at the risk-free interest rate. To compensate for the assumed risk, banks must pay assessment premiums sufficient to cover insurance losses and FDIC operating costs and to maintain the reserve fund at a mandated ratio. These are flat-rate premiums for all banks in a particular risk category that may not match the underlying risk in a bank's activities. This means that some banks are overpaying for deposit insurance, whereas others are underpaying.

A major flaw in this system is the moral-hazard problem, as increased risk ultimately means more bank failures and greater losses for the insurer. To minimize the moral-hazard problem and to make bank funding more cost-efficient, Konstas proposes a plan that is outlined in panel B, Figure 1. The difference between his plan and the current system is the placing of an intermediary in the credit-flow chain, with the initial lender (the saver) serving as lender to the intermediary and the intermediary (SI depositor) serving as lender to the bank. The FDIC would guarantee the saver's loan to the intermediary, who would then be able to borrow at the risk-free interest rate. But the guarantee would also dictate that the intermediary's deposit at the bank be statutorily defined outside the realm of FDIC insurance. This constraint means that the deposited funds would remain at the bank at SI depositors' own risk. To ensure that SI depositors are able to meet

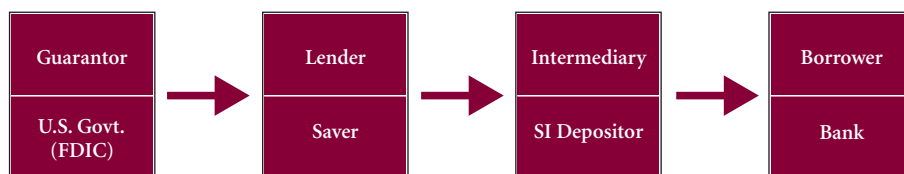**Figure 1** Current and Proposed Insurance Systems

A. Current System
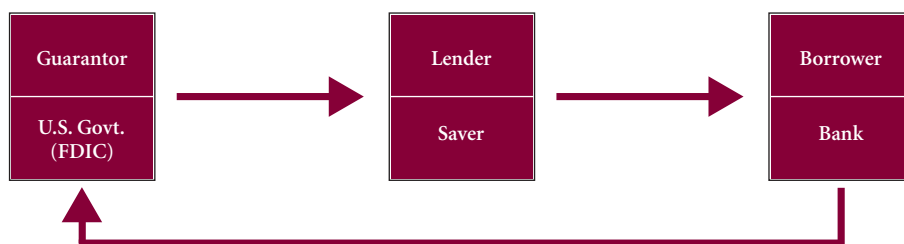
1. FDIC guarantees (assumes default risk for) the saver's loan to bank.
2. Saver lends to (deposits funds in) bank at the risk-free rate.
3. Bank pays the FDIC an assessment premium.

Shortcomings: Moral-hazard problems; small-deposit funding of banks.

B. Proposed System of Self-Insured Depositors

1. FDIC guarantees (assumes default risk for) the saver's loan to SI depositor.
2. Saver lends to SI depositor at the risk-free rate.
3. SI depositor lends the bank the loan proceeds plus equity at own risk; charges bank own cost of funds plus a risk premium.

Advantages: Bank risk priced into bank's cost of funds; incentives for depositor discipline; less risk of loss for the government.

the "own-risk" obligation, they would have to combine a certain amount of their own money with the money they borrowed, so that if the bank in which the package was deposited failed, it would be the depositor's money that was used up first to absorb losses before loss spilled onto the guarantor of the borrowed portion. To remain viable, SI depositors would need to earn a return at least equal to their cost of borrowing plus a risk premium based on the risk profile of the bank.

The Federal Home Loan Bank as a Financial Model

As discussed above, each SI depositor would be borrowing separately in order to raise the needed funds. In terms of earnings, smaller depositors would be at a disadvantage to larger depositors because of the economies-of-scale limitation. Another limitation is that each SI account could remain self-insured only up to its capital, leaving the FDIC (as the guarantor of the SI depositors' lenders) responsible for losses in excess of that capital. These problems could be overcome if each depositor borrowed the funds through a "Self-Insured Depositors' Financing Office" (SIDFO), which would issue securities in amounts to meet the needs of all SI depositors (*see* panel A, Figure 2).

The FDIC would guarantee the lenders (the buyers of securities) to SIDFO against default, and this guarantee would enable SIDFO to raise its funds at the risk-free rate. The funds raised would serve as loans to SI depositors after they post the required capital. The SI depositors would use the proceeds (together with their capital) to buy certificates of deposit (CDs).

SIDFO's lending rate to SI depositors would be based on its own cost of borrowing, its operating expenses, and the costs during failures when the loss exceeded the SI depositors' equity, which would render SI accounts wholly self-insured.[4] The SI depositors' lending rate to a bank would include their cost of funds plus a perceived risk premium.

The FDIC-sponsored SI-depositor system would parallel the financial model of the Federal Home Loan Banks (FHLBs) (*see* panel B, Figure 2). The FHLB equivalent of SIDFO is the Office of Finance (OF). The counterparts of SI depositors are the FHLBs.

There are three reasons to set up a new system: (1) Although SI depositors and FHLBs would both hold loan assets of similar default risk, only the former could realize loss in a failure; (2) in pricing the advances to members, all FHLB members are charged the same rate, so the intrinsic risk for members is not included in the price (i.e., the moral-hazard issue); and (3) since the prospective SI depositors already exist (see below), there would be no need to create new entities and pass on the costs of operating and regulating them to banks.

The Population of Self-Insured Depositors

The usual (retail) sources of funds to banks, thrifts, and other financial intermediaries are CDs, checking accounts, and savings deposits from individuals, often in small amounts through branch networks. In contrast, wholesale sources—federal funds, jumbo CDs, brokered deposits, and FHLB advances—are raised in large amounts, mainly from other financial institutions.

Because of their leveraged position, SI CDs would not be suitable for the small savers. Institutions handling large funds would be most apt to invest in SI CDs—banks, thrifts, insurance companies, credit unions, and various types of stock and money market mutual funds. As SI depositors, these institutions would be leveraging their capital for the sake of rate spreads and taking the same risks as all intermediaries.

The benefit for intermediaries as SI depositors would be the option of raising funds at rates equal to SIDFO's cost of borrowing. The FDIC's guarantee to SIDFO's lenders would negate the need for a 100-percent capital constraint, making it possible for SIDFO to borrow at government-equivalent credit ratings. The intermediaries could earn wider interest-rate spreads on their investments and raise funds in larger blocks through SIDFO than they would as regular intermediaries raising funds under their own names.

Parameters and Criteria for Conversion to Self-Insurance

Why and when would banks and investors find it advantageous to switch their status as depositors from FDIC-insured to self-insured?

The parameters for "why" are the capital ratios on SI accounts, the SIDFO lending rate, and the bank-failure risk to SI depositors. For capital requirement, the author assumes a ratio of 10 percent, which is equivalent to the current requirement by regulators for well-capitalized banks. This ratio means that a depositor could borrow $9 of funds from SIDFO for each $1 of equity. The SIDFO lending rate would be based on the borrowing experience of OF in the FHLB system. In 1998 the interest cost on $329.4 billion of average balances of FHLB-consolidated obligations was 5.53 percent. After considering that SIDFO would likely be able to borrow somewhat cheaper than OF and after including the costs of operating SIDFO (based on the OF experience), the stipulated SIDFO lending rate is 5.50 percent. Since SI depositors would be uninsured, they would need to adjust their returns for *the risk of failure by the bank*. This risk would vary from bank to bank, but for all banks it is assumed to be equal to the ratio of the FDIC's provision for losses to insured deposits (0.02 percent in 1998).[5]

The underlying premise is that the SI depositors would not have the power to secure more than competitive returns. And since the demand for SI funds would be limited and the supply unlimited, banks would be given a high degree of monopsony power and the ability to capture the surplus value created from the conversion of existing deposits to SI deposits.

The criteria for "when" are the SIDFO lending rate and the relationship between that rate and the rates paid on existing accounts. For both depositors and banks, only accounts currently carrying interest above the SIDFO lending rate would have possibility for conversion to SI deposits.

The Deposit Amounts Likely to Convert

To estimate the funds that would convert to SI deposits, data are needed on accounts within each bank now paying more than the SIDFO lending rate of 5.50 percent. However, interest-rate data on an individual-account basis are not available, so the author uses the average interest-expense ratio on deposit accounts for the bank as a whole. The interest-expense ratio is defined as annual interest expenses on deposits divided by aver-

Figure 2 Comparison between Proposed Insurance System and the Federal Home
Loan Bank System

A. Proposed System

Guarantor	Lender	Common Finance Office	Intermediary	Borrower
U.S. Govt. (FDIC)	Saver	SIDFO	SI Depositor	Bank

1. FDIC guarantees (assumes default risk for) the saver's loan to SIDFO.
2. Saver lends to (i.e., buys securities of) SIDFO at the risk-free rate.
3. SIDFO lends to SI depositor at cost (risk-free rate) plus own operating expenses and excess loss from insolvent SI depositors.
4. SI depositor lends to bank at own risk; charges bank own cost of funds plus a risk premium.

Additional advantages: Better system implementation; maximized funding efficiency (economies of scale) on both borrowing and lending sides; virtually no risk of loss for the government.

B. Federal Home Loan Bank (FHLB) System

Guarantor	Lender	Common Finance Office	Intermediary	Borrower
U.S. Govt. (FHLB Borrowing Authority from Treasury)	Saver	FHLB Office of Finance (OF)	FHLB Bank	Thrift or Bank

1. Government implicitly guarantees the saver's loan to OF.
2. Saver lends to (i.e., buys securities of) OF at near risk-free rate.
3. OF lends (transfers funds) to Federal Home Loan Bank at cost (near risk-free rate).
4. FHLB makes secured (collateralized) loans to thrifts or banks; charges thrift or bank own cost of funds plus own operating costs, OF costs, and costs for FHLB regulator.

Disadvantages relative to SI system: No incentive for market discipline; risk premium not included in bank's or thrift's cost of funds; failure losses shifted to government (FDIC); more government infrastructure and regulation; higher cost of funds for thrifts and banks.

age quarter-end deposit balances for the year. Banks with interest-expense ratios above 5.50 percent would find it profitable to convert to SI CDs.[6]

Call Report data were used to compute interest-expense ratios for time and savings deposits for all banks in 1998. Numerous banks had expense ratios above 5.50 percent, but only on time deposits. As shown in Table 1, CD time deposits of banks with expense ratios above 5.50 percent totaled $533.4 billion, consisting of $53.3 billion of depositor equity and $480.1 billion of borrowing from SIDFO. Banks switching to SI CDs would be smaller on average than banks not switching.

Benefits Conveyed and Risks Curtailed

The cost to banks with CDs less than $100,000 and expense ratios above 5.50 percent (banks that would be slated to convert to SI deposits) is $18.7 billion in interest costs in order to maintain $320.3 billion worth of CDs—a rate of interest of 5.84 percent (Table 1). How much would the banks need to pay their depositors to induce them to switch to SI CDs?

If the SI depositors could secure only competitive returns, the answer is 5.554 percent. At that rate, the SI depositors would earn 5.84 percent, bringing them on par with the rate earned before they switched to SI CDs and the rates currently earned

by other (non-SI) investors. The banks, however, would have saved 28.6 basis points (0.0584 – 0.05554) as a result of the SI switch. Likewise, the interest cost would decline from 5.90 percent to 5.56 percent for banks with CDs above $100,000 after the shift to SI CDs. Combining the banking groups results in a rate decline from 5.87 percent to 5.557 percent. The cost for $533.4 billion of SI CDs would fall from $31.3 billion to $29.6 billion with the lower rate, thus improving the banks' net interest margin by 31 basis points and raising their return to equity by 3.6 percentage points (given their 8.5 percent capital ratio in 1998). In addition, banks would save conversion by meeting their funding needs with fewer SI accounts and by not paying assessments to FDIC on SI deposits. And the SI intermediaries would benefit by being able to borrow money from SIDFO in larger amounts and at a lower cost.

Of the $533.4 billion in SI CDs, the FDIC would shed liability for the $391 billion of insured bank debt (i.e., $320 billion of SI CDs switched from accounts below $100,000 plus an estimated one-third of $213 billion of SI CDs from accounts above $100,000) and assume liability for $480.1 billion of SIDFO debt, which would dramatically decrease the FDIC's odds of incurring loss from bank failure. The SI depositors' pricing of bank risk into the cost of funds would prompt banks to lower their risk profile, which means fewer bank failures, hence smaller losses for the FDIC. Moreover, the SI plan would further distance the FDIC from failure loss by imposing additional barriers before losses could occur; i.e., the bank must default along with the SI depositor and SIDFO must incur a loss and become defunct.

Summary and Conclusions[7]

Deposit insurance renders deposits at different banks equally attractive and perfectly secure. This effect can lead to unjustified risk taking by banks. One way to limit this problem is to rely on uninsured depositors to price bank risk into banks' cost of funds.

Konstas offers a plan to increase the amount of uninsured deposits. At present there is one government-guaranteed lender (depositor), one recipient of guaranteed credit (bank), and one level of risk capital (bank's equity) protecting the guarantor (FDIC). In Konstas's plan, the recipient of the guaranteed credit would still be the bank. However, no loan guarantee would be given to depositors with a bank. Instead, the guarantee would apply to investors who bought the securities of a central financing office (SIDFO) that made equity-secured loans to financial intermediaries (SI depositors). The intermediaries would then invest the proceeds in uninsured bank deposits. Under these terms, the government would get more protection against loss (SI depositors' capital) and the SI depositors would have to monitor their banks aptly and demand premiums based on risk to avoid loss and earn a competitive return.

Significantly, the plan by Konstas does not mandate that banks issue and assume any specified amount of SI-deposit liabilities. A bank would issue SI CDs only if the cost would be less than raising funds from other sources. His analysis indicates that only the larger time deposits paying interest above the SIDFO lending rate would meet the criteria for switching to SI deposits. Savings and similar retail deposits would not qualify because banks could secure such funds at a cost below the

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Table 1 Amounts of Time Deposits Converted to SI Deposits and Associated Interest Costs, 1998 (in millions of dollars)

	Deposit Amounts	Interest Expenses	Average Interest Cost (in percent)	Number of Banks	Assets per Bank
Banks with Expense Ratios above 5.50%					
Current Time Deposits of $100,000 or More	213,147	12,552	5.90	4,535	597
As Converted to SI Deposits	*213,147*	*11,851*	*5.56*		
Current Time Deposits under $100,000	320,286	18,720	5.84	4,597	388
As Converted to SI Deposits	*320,286*	*17,789*	*5.55*		
Subtotal	533,433	31,272	5.87		
As Converted to SI Deposits	*533,433*	*29,643*	*5.56*		
Banks with Expense Ratios below 5.50%					
Current Time Deposits of $100,000 or More	183,198	8,023	4.38	4,132	653
Current Time Deposits under $100,000	439,052	22,513	5.13	4,109	881
Subtotal	622,250	30,536	4.91		

Source: Federal Deposit Insurance Corporation

SIDFO rate. Konstas estimates that some $533 billion of time deposits would have converted to SI CDs in 1998—about 10 percent of all the funds in the U.S. banking system.

Acknowledgments

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Notes

1. Brewer (1995); Kane (1989); McKenzie, Cole, and Brown (1992).
2. To learn more about FDICIA and its effects, see Lemieux (1993) and Benston and Kaufman (1997).
3. See Office of Management and Budget (1991).
4. For example, under a 10-percent capital ratio, an SI depositor would lose 100 percent of posted capital if the bank failed and depositors lost 10 cents on the dollar. If the loss exceeded 10 cents on the dollar, the excess would fall on future SI depositors through the higher SIDFO rate, instead of the FDIC rate.
5. For this assumption to be meaningful in determining the switch between SI and non-SI depositors, we must also stipulate that, in terms of depositor preference, SI depositors would be equally senior to non-SI depositors. Junior status would transfer the risk away from non-SI depositors, rendering the failure risk ratio assumed above pointless.
6. Although a bank would be considered to have switched all accounts to SI status, its average expense ratio of 5.50 percent may well incorporate as many accounts earning more than 5.50 percent that merit a switch to SI status as accounts earning less than 5.50 percent that do not merit a switch. As noted in the text, it may be more precise to estimate the likelihood of switching on the basis of individual accounts but such data do not exist. Konstas therefore adopts the average-expense method, under the assumption that the accounts with average ratios below 5.50 percent that wrongly assumed to switch to SI CDs would likely be offset by the accounts with average ratios above 5.50 percent that are assumed not to switch.
7. The author notes that his conclusions do not necessarily reflect the views of the FDIC.

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About the Author

PANOS KONSTAS retired as a senior economist from the FDIC in 2005 after 34 years of service. He also worked as an economist at the U.S. Treasury Department and the Federal Reserve Bank of Cleveland, and taught economics at two universities. His research and publications include topics in money and capital markets, monetary economics, government-sponsored credit programs, banking industry issues, and deposit insurance reform and regulation. He received B.A. and M.A. degrees in economics from Michigan State University and a Ph.D. in economics from Oklahoma State University.

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