Using Econometric Models to Make Economic Policy

PLUS

Deregulation: A New Future for Thrifts
USING ECONOMETRIC MODELS TO MAKE ECONOMIC POLICY: A CONTINUING CONTROVERSY

Richard W. Lang

... Economists are sharply divided over the question of whether econometric models can be used to analyze policy—even if the correct type of model is employed.

DEREGULATION: A NEW FUTURE FOR THRIFTS

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... The road to financial deregulation can be a rocky one, but there may be no other choice if thrift institutions are to survive the 80s.

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The Federal Reserve Bank of Philadelphia is part of the Federal Reserve System—a System which includes twelve regional banks located around the nation as well as the Board of Governors in Washington. The Federal Reserve System was established by Congress in 1913 primarily to manage the nation's monetary affairs. Supporting functions include clearing checks, providing coin and currency to the banking system, acting as banker for the Federal government, supervising commercial banks, and enforcing consumer credit protection laws. In keeping with the Federal Reserve Act, the System is an agency of the Congress, independent administratively of the Executive Branch, and insulated from partisan political pressures. The Federal Reserve is self supporting and regularly makes payments to the United States Treasury from its operating surpluses.
Using Econometric Models To Make Economic Policy: A Continuing Controversy

by Richard W. Lang

Economic forecasting frequently has been called an art, not a science. Yet this art often is crucial to the formulation of public policy. Policymakers—such as the officials of the Federal Reserve System—rely on forecasts of economic activity when they develop policies. For example, in January of each year, the Federal Reserve decides on tentative target ranges of monetary growth for the coming year. In order to choose the appropriate target, the Fed would like to know how the economy will respond to various monetary policies. The Fed would like to have accurate forecasts of economic activity *conditional* on alternative rates of money growth in the economy.

How can the Fed obtain forecasts that will help it make policy decisions? It must use some sort of forecasting model. But the choice of a forecasting model (and associated statistical techniques) depends upon how the forecast will be used. In particular, not all forecasting models are designed to evaluate alternative economic policies.

Economists and policymakers, including those within the Federal Reserve System,
frequently use econometric models to forecast the effects of choosing one policy or another. But over the past few years, serious questions have been raised about the use—and usefulness—of econometric models in evaluating and choosing among alternative economic policies. The resulting debate among economists has addressed the current state of economic theory as well as the state of econometric practice. Resolving these issues will require substantial efforts on the part of theoretical economists as well as econometricians and statisticians. In the meantime, the controversy about the use of econometric models for policy evaluation has generated some heated debates.

POLICY ANALYSIS HAS SPECIAL REQUIREMENTS

The choice of a forecasting model depends upon how the forecast is to be used. For example, suppose your firm's sales have been highly correlated historically with national output (Gross National Product, or GNP). To plan production schedules for 1983, you want an accurate prediction of 1983 GNP. What model should you choose? Whatever works! You can use any of a number of approaches: a large econometric model, a small model, a statistical procedure based only on GNP's past history, or a purely judgmental approach. In fact, you could "pool" several models' predictions of GNP, taking either a simple average or a weighted average based on past predictive accuracy. The point is that to obtain a GNP prediction to be used to plan production schedules, whatever works—whatever has minimized the prediction error—can be used.

You do not have to be an economist or use a forecasting model based on economic theory to predict economic variables. Economic predictions attempt to estimate future values of economic variables, such as GNP, unemployment, and inflation. These forecasts may be based on a model grounded in economic theory, but they need not be, and often they are tied only loosely to theory. If we know A and B are highly correlated, and we know A earlier than B, we have a good chance of inferring the future value of B. If one finds that the unemployment rate always rises one-tenth of one percent when Aunt Matilda has a cold, Aunt Matilda's health can be used to forecast. To predict, one doesn't necessarily need to know what is cause and what is effect; a high degree of correlation is all that is required.

Economic theory, in contrast, attempts to spell out cause-and-effect relationships in economic behavior, starting from the premise that individuals desire to maximize their own welfare and businesses attempt to maximize their profits. For example, economic theory tries to explain how the demand for a commodity changes as its price changes; or what forces affect the level of interest rates over time; or what factors change unemployment.

If you use predictions of economic activity in making your business decisions, you want predictions that turn out to be close to the actual values. If the predictions miss the mark, your profits could be affected adver-
sely. To provide an accurate prediction you might use a model grounded in economic theory. But this approach might be more expensive than some other approach that does at least as well. Or you might find that there are some variables for which economic theory provides little guidance in generating a forecasting model. In any case, as long as you care only about the accuracy of your predictions, not about how they are obtained, economic theory need not play a major role in your forecasting procedure.

In contrast, if you are trying to estimate the effects on the economy of alternative economic policies, you need more information than if you are only interested in predicted values with small errors. You need to know the links between policy actions and the behavior of the economy. Policymakers are clearly in this position, and economic theory can provide guidance to them in building models of these links. Although the theoretical relationships between policy instruments and all other economic variables need not be spelled out completely, policy evaluation does require more information about the structure of the economy than would be necessary if one were making predictions alone.

Because different types of forecasting models require the collection of different amounts of information, the choice of a model depends on how the forecast is to be used. Business forecasters may well prefer to use one type of model, while an economic policymaker would find that same model of little use in evaluating alternative policies. Different forecasting purposes generally are accommodated by one of three types of econometric models: autoregressive models, reduced-form models, and large-scale structural models. 3

3For a more detailed description of these models than what follows, see Intriligator, especially Chapters 2 and 15.

WHAT DIFFERENT MODELS CAN DO

Econometric models consist of a set of equations that are supposed to represent the relationships between economic variables. Econometric models of the national economy come in various sizes, from just a single equation to hundreds of equations. The three different types of econometric models are distinguished not only by size, but also by the information they require and the kinds of analysis for which they can be used.

**Autoregressive Models.** Estimating an autoregressive model involves a statistical procedure which relates the current value of an economic variable to the past values of the same variable—its own past history. A single equation which relates current values of GNP to past values of GNP, for example, would be a simple autoregressive model of overall economic activity. To generate a prediction of next year's GNP, the current and past values of GNP are plugged into the autoregressive model's equation.

Although such predictions do not rely on any information other than the variable's own past history, these models at times have been more accurate than other types of models. But lack of reliance on any other information is exactly why autoregressive models are not helpful to policymakers in evaluating alternative economic policies. The Fed, for example, may ask the question, "How fast will GNP grow next year if money grows at X percent instead of Y percent?" Since money growth does not enter into the autoregressive GNP model's forecasting procedure, the model cannot answer this question. A model that can answer the Fed's question must include a variable representing money growth in addition to just GNP's past history. One way to capture this additional information is to use a reduced-form model.

**Reduced-Form Models.** Reduced-form models seek to explain the relationship between policy variables and economic variables such as GNP. A reduced-form model does not attempt to capture each of the steps...
in the process by which a change in economic policy affects the economy. Instead, a reduced-form model seeks to explain the overall net effect. Such a model need contain only a few equations, so it is relatively cheap to build.

Although reduced-form models of GNP do not explicitly take account of the interrelationships of GNP with all other economic variables, they do capture a quantitative relationship between GNP and policy variables. Thus, these models are used to answer such questions as, "How fast will GNP grow if money grows at X percent instead of Y percent?" Reduced-form models often are used to evaluate the effect of fiscal or monetary policy on economic activity. Monetary policy usually is represented by the rate of growth of some measure of the money stock. Fiscal policy is measured by aggregate federal spending, aggregate taxes, or the budget deficit. The historical relationship of these policy variables to GNP can be statistically estimated in this reduced-form context, and then this estimated relationship is used to forecast next year's GNP, assuming a particular setting for the policy variables. By plugging different values of policy measures into the model's equations, policymakers might make judgments about the relative attractiveness of different policies. The effect on GNP of alternative choices of next year's policy variables might be evaluated in this context.

These small reduced-form models are usually used to evaluate the effects of broad economic policies—such as total government spending, total tax revenues, or growth of the money supply—on aggregate economic activity such as GNP, inflation, or unemployment. They are not typically used for evaluating the effects of the narrow instruments of monetary and fiscal policy. For example, the effects of changes in tax rates or in depreciation rules, or the impact of changes in reserve requirements or in the discount rate, cannot be readily examined in reduced-form models. To study these effects, a model that includes more detail about the economy is required. The model must attempt to lay out the relationships among an expanded number of economic variables, and therefore it must be larger in scope. Larger models (or parts or sectors of them) frequently are employed to study the impact of changes in policy instruments because they provide details about economic relations that small models lack.

**Large-Scale Structural Models.** Large-scale structural models are used for all types of policy evaluations. The term 'structural' means that the model attempts to capture the structure of the economy—the interrelationship of all relevant economic variables. These models are built by analyzing the individual sectors of the economy.

For example, a large-scale structural model could have equations explaining the supply and demand for various products such as autos, steel, and consumer installment credit. But steel is a significant input in the production of autos, and consumers often purchase autos on installment credit, so the large model's equations would tie these sectors together. Large-scale structural models can be large indeed; they typically are composed of several hundred equations.

Variables representing monetary and fiscal policies also are included in structural models. Indeed, these large models typically attempt to specify in detailed fashion the channels through which policy actions affect the economy. By assuming particular values for the settings of policy variables, they might be used to forecast next year's GNP under alternative economic policies—for example, how next year's GNP will change if money grows at different rates. In addition, these large models are used to answer questions about how particular industries—housing, autos, agriculture—will behave as economic policies change.

The equations that comprise large-scale structural models are, in principle, based on
economic theory. Because of their foundation in economic theory and their attempt to capture the detailed structure of the economy, these models have a wider range of uses than either autoregressive or reduced-form models. Large models are used to predict and to evaluate alternative economic policies as well as to evaluate economic theories. But these models have been subject to serious criticisms in regard to their usefulness in evaluating alternative economic policies, and even in regard to their ability to provide reliable estimates of the structure of the economy.

**CAN MODELS CAPTURE ECONOMIC REALITY?**

Building an econometric model that captures the structure of the economy is a tall order. Despite their size, large-scale structural models are still very simple compared to the complexity of a nation's economy. Do these models reflect reality—or at least are they close enough approximations that they do not substantially misrepresent reality? Economists have hotly debated this subject in recent years.

**Specifying the Model.** One problem in formulating a model to represent reality involves whether the model’s equations adequately specify the relationships among the economic variables being examined. Economic theories do not necessarily make clear which variables can be safely omitted when building models of economic relationships. For this reason, different model-builders include different sets of economic variables in their models' equations in order to improve their models' predictive ability. Consequently, there are a number of different structural models of the U.S. economy. Estimates of the relation between two variables—such as between GNP and money—differ across these models because the "other factors" that are included in the models' equations vary from one model to another. Some economists have argued that too often a researcher chooses a particular specification of the equations in a model because it tends to support his preconceived idea of what the relationship should be.5

This multiplicity of specifications arises, in part, because the field of economics is not amenable to experimental examination involving replications of the same events. Unlike experiments in physics or chemistry which can allow one thing to change while all others are kept the same, empirical studies of economic theories are done by examining a system—the economy—in which almost everything is changing at the same time. Statistical techniques that estimate economic relations can take account of changes in the variables that alter the economic environment, but only if data on these variables are included in the econometric model. Yet data and time limitations prevent the inclusion of all variables that could be remotely related to the variables of interest to policymakers.6

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4 For a general discussion of specification problems in economic models, see Intriligator, Chapter 2.


6 Another problem in specifying an econometric model is that, in general, economic theory does not provide sufficient information to write down the precise form of the relationship between two variables—whether their relation is linear or nonlinear. In a linear relation, the separate effects of several variables can be added together to obtain the total effect on the variable being explained in the model. In a nonlinear relation, however, the effects of several variables cannot be simply added together since their effects on the variable being explained are multiplicative.
Choosing a “best” specification of a model of the economy has proved difficult because no one model has proved consistently superior to others in its forecasting ability or in its ability to agree with economic theory. But if important variables are inadvertently omitted from one of these models, the model is misspecified. And a misspecified model is likely to give erroneous estimates of the effects of different policy options on economic activity.

**Identification Problems.** Another problem that affects large structural models of the economy is the difficulty of identifying the source of a change in an economic variable. For example, consider a situation in which a researcher observes that the price of oil is changing. Oil prices can change because either the supply of oil is changing or the demand for oil is changing, or because both are changing. In general, the researcher would like to identify which factors are changing the price of oil. To do so, the analyst must specify those factors that affect demand for oil but not supply, as well as those factors that affect supply but not demand. By doing so he ensures that his model is identified—that he can determine why the price of oil is changing.7

In a large-scale structural model of the economy, this process of identifying the model’s equations for each market or sector is a large undertaking. That is, the sector explaining the price and quantity of oil must be identified, the sector explaining the price and quantity of labor must be identified, and so on—and then these separately identified sectors are tied together into the large model. Is the large model as a whole then identified? Many argue it is not. The reason is that this market-by-market identification process often ignores common factors among markets and sectors which become apparent once these markets and sectors are aggregated into a large model.8

If a model’s equations are not appropriately identified, a change in one variable (such as GNP) could be incorrectly attributed to a change in another variable. The true relationship between the variables could be obscured. Estimates of the model’s behavior would not adequately represent the way the economy actually behaves.

Policymakers hope that a model’s identification problems do not significantly obscure the effect of policy variables on economic activity. Some economists believe that this hope is well-founded.9 But the general problem of identification in economic models is likely to continue to call into question the reliability of large-scale models.10

While specification and identification problems call into question the reliability of large-scale structural models in representing reality, there is another criticism of the use of all econometric models—structural, reduced-form, and autoregressive—in the evaluation

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7 See Intriligator, Chapter 2, for a general discussion of the identification problem.

8 Sims, in a recent article in *Econometrica*, calls the current identification procedure of large models “incredible identification.” He argues that “the style in which large-scale macroeconomic model-builders construct claims for a connection between these models and reality—the style in which identification is achieved for these models—is inappropriate, to the point at which claims for identification in these models cannot be taken seriously.” Malinvaud, in a 1981 *Econometrica* article, agrees with Sims on this point, although he disagrees with Sims on many others. See Christopher Sims, "Macroeconomics and Reality," *Econometrica* 48 (January 1980), pp. 1-46, and E. Malinvaud, “Econometrics Faced with the Needs of Macroeconomic Policy,” *Econometrica* 49 (November 1981), pp. 1363-1375.

9 Sims argues that large-scale models still are useful for forecasting and policy analysis. He says, “For forecasting and policy analysis, structural identification is not ordinarily needed, and false restrictions may not hurt, may even help a model to function in these capacities.” See Sims, *Econometrica* 48 (January 1980), p. 11.

10 Malinvaud discusses the question of reliability in more detail; see *Econometrica* 49 (November 1981).
of alternative economic policies. This criticism—called the Lucas critique—has become the subject of much debate among economists and policymakers.

THE LUCAS CRITIQUE: DO POLICY CHANGES INVALIDATE MODELS?

In 1976, Robert Lucas wrote an article in which he argued that "any change in policy will systematically alter the structure of econometric models." His argument basically goes as follows.

The structure of an econometric model embodies and reflects the behavior of economic agents (consumers and producers). The decisions of consumers and producers, however, depend on their perceptions of the rules being followed by economic policymakers. If policymakers change their policies (the economic rules of the game), producers and consumers might change their actions and decisions as well, and hence change the structure of the economy.

Lucas viewed this conclusion as a fundamental criticism of the use of econometric models for policy evaluation. In his view, "comparisons of the effects of alternative policy rules using current macroeconometric models are invalid regardless of the performance of these models over the sample period or in ex ante short-term forecasting." Since policymakers want to evaluate the effects of different policy actions, the Lucas critique is important.

How severe is Lucas's criticism? Its severity is still an open issue (see Appendix). Some argue that the Lucas critique is not crucial if the policy alternatives in question involve simply varying the value of a policy instrument (without changing the way in which policy is executed). For example, consider a situation in which there has been an excise tax on liquor for many years and the government has changed the tax a number of times. Using this historical experience, researchers can estimate the effect of a change in the excise tax on the amount of liquor sold. Such estimates then can be used to address the question of what effect a new change in the excise tax of 10 percent will have on liquor sales, compared to a change in the tax of 5 percent.

The situation is much different, however, when the excise tax is first introduced. Since there is no historical experience to measure the past impact on liquor sales of changes in such a tax, the researcher must obtain more specific information on both the supply and demand for liquor before being able to evaluate the impact of the new tax. In this case the Lucas critique certainly applies.

Similar situations could exist for more general fiscal and monetary policies. That is, if the Federal Reserve has been setting monetary growth targets for many years and has changed them over time, researchers can estimate past effects of changes in money growth on economic activity. This suggests that the Fed can get a reasonable answer to the question of "what happens to the economy if money increases at X percent in 1983 rather than Y percent." But this is the case only if the model used to make these comparisons was estimated over a period when there were no changes in the way monetary policy was conducted. If the Fed switches the way it tries to control the economy, then the Lucas critique becomes a more serious problem.

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12 On the other hand, Lucas viewed this critique as "of only occasional significance" for the issues involved in using just the short-term predictions of econometric models. Lucas, p. 41.

In a recent article, Christopher Sims argues that the types of policy changes that are subject to the Lucas critique rarely occur.\textsuperscript{14} According to Sims, policymakers do not often make radical changes in monetary or fiscal policy. Instead, changes in economic policies are made slowly over time, so that any resulting change in the structure of the economy would occur slowly over time as well. Sims concludes from this line of reasoning that econometric models can be used to evaluate alternative policies, although he has suggestions about the type of model to be used. In particular, he argues in favor of an expanded version of the reduced-form approach that involves elements of autoregressive models as well.\textsuperscript{15}

The debate about the significance of the Lucas critique is of particular concern to the Federal Reserve. Prior to October 1979 the Fed attempted to influence money growth mainly by changing short-term interest rates. Since then the Fed has focused principally on manipulating the growth of reserves to control money growth. Whether this change in the conduct of policy is subject to the Lucas critique and, if so, how sensitive the structure of the economy is to such a change in policy, are questions still being worked on by many researchers today.

**SUMMARY**

The debate about the validity of using econometric models to analyze economic policies probably seems arcane to most people. But since econometric models and forecasts based on those models are used by policymakers in making their decisions, the general public is affected by the outcome of these debates. Robert Solow cryptically pointed out the relevance of such debates to the public in terms of monetary policy at a 1978 conference:

\begin{quote}
I would like to assure the practical people in this room and also the ones out in the streets of Edgartown [where the conference was held] that although the battles that are fought in conferences like this appear to be fought with antique pop guns, the bullets are real and they may soon be fired at you by the Federal Reserve. \textsuperscript{16}
\end{quote}

The possibility that an econometric model misrepresents reality—because of specification or identification problems, or because of the Lucas critique—does pose risks to economic policymaking. Resolving some of these issues will require a lot of work. Economic theory must be pushed to provide better specification and identification of the relationships among variables. Econometricians and statisticians will have to put more emphasis on testing specifications in econometric models and on testing the sensitivity of the models' structures to policy changes. When these problems are better resolved by the economics profession, economic forecasting and the formulation of economic policies will be able to be more a science, and less an art.

\textsuperscript{15}Sims's approach is called vector autoregression. For more about this type of model, see Thomas J. Sargent, "Estimating Vector Autoregressions Using Methods Not Based on Explicit Economic Theories," *Quarterly Review*, Federal Reserve Bank of Minneapolis (Summer 1979), pp. 8-15.
APPENDIX . . .

ECONOMISTS SHARPLY DIVIDED OVER ECONOMETRIC MODELS

In the 1970s, the issues of identification, specification, and the Lucas critique were raised in attacking the usefulness of standard econometric models. Robert Lucas and Thomas Sargent expressed strong views on this subject at a June 1978 conference:

First, and most important, existing Keynesian macroeconometric models are incapable of providing reliable guidance in formulating monetary, fiscal and other types of policy. This conclusion is based in part on the spectacular recent failures of these models and in part on their lack of a sound theoretical or econometric basis. Second, on the latter ground, there is no hope that minor or even major modification of these models will lead to significant improvement in their reliability.*

These criticisms were not left unanswered, however, by the proponents and users of the standard macromodels. Not everyone agrees with the Lucas-Sargent views that these models do not and cannot capture reality. At the same conference, Franco Modigliani commented that the problem was not that econometric models fail to capture the real world, but that the real world is difficult for policymakers to control:

To a large extent the sweeping indictment of the Lucas and Sargent paper confuses two kinds of crises. One is the crisis of whether these models have captured the world itself. The second crisis, which I believe is the real problem, is that the world we capture is extremely hard to tame, to cure from inflationary shocks, the new disease of '73-'74 and thereafter. So the crisis is right there in the structure of the world, not in our ability to capture that structure.†

Both Benjamin Friedman and Robert Solow commented that Lucas and Sargent had overstated the
problems that standard econometric models have had in representing and forecasting economic
activity. Friedman criticized Lucas and Sargent’s claim that Keynesian models have fundamental
methodological problems that are not shared by alternative models proposed by them. And both
Friedman and Solow complained about the strong terms in which Lucas and Sargent condemned the
standard models:

[Lucas and Sargent] describe what happened in the 1970s in a very strong way
with a polemical vocabulary reminiscent of Spiro Agnew. . . . I share Franco Modigliani’s view that the alarmism, the very strong language that I read to you, simply
doesn't square with what in fact actually happened. If you give grades to all the standard
models, some will get a B and some a B minus on occasion, especially for wage equa-
tions, but I don’t see anything in that record that suggests suicide.

For policymakers’ use of econometric models to evaluate alternative economic policies, the Lucas
critique—that changes in policy will alter the structure of the economy—is most important. Lucas
had made this point at an earlier conference:

Given that the structure of an econometric model consists of optimal decision
rules of economic agents, and that optimal decision rules vary systematically with
changes in the structure of series relevant to the decision maker, it follows that any
change in policy will systematically alter the structure of econometric models.

For the question of the short-term forecasting or tracking ability of econometric
models, we have seen that this conclusion is of only occasional significance. For issues
involving policy evaluation, in contrast, it is fundamental: for it implies that com-
parisons of the effects of alternative policy rules using current macroeconomic models
are invalid regardless of the performance of these models over the sample period or in
ex ante short-term forecasting.

Not all economists agree on the severity of the Lucas critique. Lucas’s conference paper was
criticized by Robert Gordon, who was less pessimistic about the usefulness of econometric models in
evaluating alternative policies:

While Lucas’ critique effectively demonstrates an important weakness of econometric simulations, his paper overstates the impossibility of remedy: and hence its
implications are likely to be misunderstood by policymakers. . . .

My conclusion from Lucas’ analysis is much less pessimistic. While I am pre-
pared to grant the validity of the proposition that the mechanical extrapolation of a model with fixed parameters cannot provide useful information on the effects of all policy changes, on the other hand the effects of some policy changes can be determined if parameter shifts are allowed and are either (a) estimated from the response of parameters to policy changes within the sample period or (b) are deduced from *a priori* theoretical considerations.#

After examining several different cases of different types of policy changes, Gordon concluded that Lucas's argument was overstated and that some types of policy changes could be evaluated in econometric models.**

The extent to which the Lucas critique applies is still being debated, but it seems clear that econometric models should be used with special care when analyzing large changes in economic policies. William Poole described the range of policy changes that could be considered in evaluating the relevance of the Lucas critique:

First of all, there is no model builder in this room who would expect his model to hold up if we were to consider an experiment, let's say, of 100 percent rate of money growth in the next 12 months. No model builder expects his model to stand up in that kind of an experiment. Clearly the institutional structure in the model, the lag structure, and so forth, simply would fall apart. Now, what about 50 percent money growth? Or 25 percent money growth? As we go down to ranges that are closer to those that we are familiar with, and we have more confidence that we are within the ballpark of the historical range of observation, then we are more confident that the models can tell us something. But that is not the end of the story. . .we can mention a long list of apparently minor changes. . .They don't involve major changes in the institutional structure, and it's hard to see how they make much difference.

But that is not the point, it seems to me. The point is. . .whether the changes in institutional structure in response to policy changes are large compared to the changes in forecasts of economic variables in response to policy adjustments within a fixed institutional structure. After all, none of us expects very big effects from policy experiments that involve a change in the annual rate of growth of money of 1 percent for six months. If we talk about 2 percentage points for six months, or 3 or 4, as we raise the policy dose, we expect larger policy effects. But, of course, we also expect larger changes in institutional structure.††

In Poole's view, most economists agree in principle with the Lucas critique about policy evaluation. But the practical implications of this criticism are still under study. As Poole points out, the Lucas critique has given model builders further impetus to refine and improve econometric models.

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**Gordon, p. 57.

Working Papers

The Philadelphia Fed's Research Department occasionally publishes working papers based on the current research of staff economists. These papers, dealing with virtually all areas within economics and finance, are intended for the professional researcher and are relatively technical. In 1982, twelve papers were added to the Working Papers Series.

A list of available papers may be ordered from WORKING PAPERS, Department of Research, Federal Reserve Bank of Philadelphia, 100 North Sixth Street, Philadelphia, Pennsylvania 19106. Copies of papers may be ordered from the same address.
The nation’s thrift institutions are among the businesses most severely hit by the recent combination of recession and record-high interest rates. During the last two years, the savings industry has suffered larger losses than the beleaguered auto and airline industries combined. Faced with the possibility of more losses this year, hundreds of thrift institutions may not survive.

A complex network of regulatory constraints and a sharp increase in both the level and variability of interest rates are the root causes of the industry’s problems. The constraints, which were designed to promote low-cost mortgage financing, have made savings institutions vulnerable to interest rate fluctuations and to changing conditions in local housing markets. Removing restrictions that limit the ability of thrifts to adapt to changing economic circumstances is an essential element in any program to restore the viability of the thrift industry. Although thrifts face a difficult adjustment period, reversing or even delaying current deregulation efforts can only make thrifts worse off.

**EARNINGS CRISIS IN THE THRIFT INDUSTRY**

Like other financial institutions, thrifts borrow money in the hope of lending it out at
a higher interest rate. ¹ Until a few years ago, the spread between the return on assets and the cost of funds amounted to a comfortable 1 percent to 1.5 percent (Figure 1). Unlike commercial banks, however, thrifts hold most of their assets in the form of long-term, fixed-rate mortgages. When interest rates rose unexpectedly in 1979, their mortgage income failed to keep up with their cost of funds. By late 1980, the spread (return on assets minus cost of funds) had turned negative, and thrift institutions were incurring heavy losses. Commercial banks were able to maintain their profitability by raising the interest rates on their loans as their cost of funds rose (Figure 2). Thrifts had to spend their accumulated reserves to cover their losses, and their net worth position dropped from $44.7 billion in December 1980 to $33.6 billion in August 1982. These aggregate data, while disquieting enough as they stand, hide the still more ominous fact that many individual institutions have used up almost completely their net worth and face liquidation or merger into stronger firms. Since the beginning of 1981, more than 700 thrift institutions, out of a total of 5,016, were merged or acquired by other institutions. Also, these net worth data are based on book values, and may overstate the financial strength of an institution (see NET WORTH AND THE BANKRUPTCY DECISION).

The problems of the thrifts are not apt to disappear overnight. Increasing competition from commercial banks and nonbank financial institutions will erode further their usual source of low-cost funds—passbook accounts. More and more depositors are demanding

¹The term 'thrifts' usually includes credit unions as well as savings and loan associations and mutual savings banks. Credit unions are excluded here because they do not have nearly as high a proportion of mortgage loans and thus their earnings are not impaired to the same degree as those of other thrifts.
In the thrift industry, the deposit insurance agencies — the Federal Deposit Insurance Corporation (FDIC) and the Federal Savings and Loan Insurance Corporation (FSLIC) — are the main agents that deal with failing thrift institutions. When should they declare a thrift bankrupt? In competitive markets, a good measure of a firm's efficiency is its profits. The present value of future profits (and losses) is what constitutes the value of a firm as a going concern. If a firm is not using its resources efficiently, its assets could find a more valuable use somewhere else. Selling the assets and liabilities will yield a premium over the firm's going concern value (assuming no liquidation costs). Thus, ideally, a firm should close down when its liquidation value exceeds its value as a going concern.

Under current regulations, the insurance agencies are required to take action whenever the book net worth of a thrift institution threatens to fall below a certain threshold, defined as a percentage of total assets. Book net worth is the difference between assets and liabilities as they appear on the balance sheet.

The relationship between this book measure and a thrift's going concern value, however, is tenuous at best. For one thing, book values reflect historical costs, such as the price paid or obtained at the time the asset or liability was first acquired. And book values do not necessarily provide information about future cash flows. For another, by concentrating on a firm's balance sheet, net worth measures tell us something about existing assets and liabilities but nothing about future investment and funding opportunities. By relying on book net worth criteria, the FDIC and FSLIC risk being too late when institutions are failing and too hasty when they are temporarily insolvent but have profitable opportunities in the long run.

The federal thrift insurance agencies are aware that their net worth measure can be misleading, and they prefer to underplay its importance. Currently they are considering alternative measures. One proposal is to focus on market net worth. This measure involves valuing assets and liabilities at their current market price. The market value of a financial instrument is the present value of the future cash flow it generates. This value will differ from the book value if the yield of the asset is different from the market rate. Thrift mortgage portfolios, when marked to market value, are heavily discounted because, on average, they earn less than the yield on new mortgages. This discount is a reflection of the earnings which thrifts lost because they held on to these low-yielding mortgages while the rate on new mortgages was rising.*

The difference between book and market value will be greater the longer the maturity and the larger the difference between current market rate and original contract rate. Given that the average maturity of thrift assets is longer than that of thrift liabilities, the market net worth of thrifts will be lower than their book value. Andrew Carron of the Brookings Institution made a tentative calculation of the market value of thrift net worth. He found that the market value had been declining since 1978 although the book value started to decline only after 1980. As of June 30, 1981, his estimate of market net worth was -$44.1 billion versus a reported book value of +$42.4 billion.†

Information on the market value of net worth is useful to thrift managers as an estimate of future net cash flows that are imbedded in the assets and liabilities acquired up to that moment. This estimate still does not correspond exactly to what we have termed the going concern value of a firm, however, since it excludes those assets and liabilities that the firm has not acquired yet but can be expected to acquire in the future. For thrifts in particular, since the new mortgages they are currently (continued)

acquiring yield more than what they have to pay for new deposits, measures based on existing assets and liabilities underestimate the present value of future profits. The fact that many newly established thrifts are very profitable is certainly an indication that, without the burden of the past, thrifts would be profitable at this moment.

To judge the financial strength of a thrift institution, the FDIC and FSLIC must go beyond evaluating current assets and liabilities. Assessing a thrift’s future viability requires a close look at investment opportunities in its market area, the expertise and efficiency of its management, and its ability to attract funds at or below market rates. The fact that most failing thrifts are acquired by firms that are willing to pay a premium over the market value of assets and liabilities does seem to suggest that there is optimism about the ability of troubled thrifts to become profitable in the future.

Thrifts must pay market rates or face losing their funding base to competitors like money market funds. Yet, thrifts are unlikely to be able to offset higher interest expenses by earning substantially higher returns on their assets. By late 1980, more than two-thirds of thrift mortgages still yielded less than 10 percent. Although new mortgages yield around 15 percent, the replacement of old mortgages has slowed down because of the current slump in housing and because people are trying to hold on to their low-cost mortgages. Thus, thrifts appear to be in quite a fix.

Thrifts must have been aware of the risks they were taking by attracting short-term deposits and by making long-term loans. What made them take such risky positions? A major part of the answer lies in government regulations.

HOW REGULATIONS HURT THE THRIFTS

Thrift institutions as they exist today are essentially a creation of Congress, which has long tried to encourage home ownership by promoting home financing. Regulations defining what thrifts can and cannot do have created a very specialized kind of financial institution to support the housing industry. Prior to 1980, these regulations almost completely limited thrift portfolios to mortgages and U.S. government securities. In addition, regulations impose restrictions on the types of mortgage contracts which thrifts can make, such as maturity and loan-to-value limitations, and until recently they prohibited adjustments in mortgage rates. There are also severe geographic constraints on lending areas. On the incentive side, thrifts have received certain tax benefits directly linked to the percentage of total assets they hold in the form of mortgages.

By and large, these portfolio regulations grew out of previously existing operating conventions. Thrifts grew up as mutual organizations devoted to the financing of

2By mid-1981 the turnover rate of mortgages had dropped to 7.7 percent from a high of 13.1 percent in 1978. A recent law enforcing non-assumability of mortgages, however, should increase turnovers.

3Current federal regulations are mostly based on Congressional legislation in the 1930s, authorizing federal savings and loan associations (Home Owners Loan Act of 1931) and creating the Federal Home Loan Bank System (1932) and the Federal Deposit Insurance Corporation (1934).

4Loan-to-value limitations impose ceilings on the ratio of the size of the loan to the value of the house that is mortgaged. Adjustable mortgage loans were authorized in April 1981.

5Savings and loans receive a bad debt tax deduction equal to 40 percent of taxable income if they have 82 percent or more of their portfolio in “qualifying assets” consisting mainly of residential mortgages and U.S. government obligations. For every 1 percent of a portfolio in which qualified assets are below 82 percent, the bad-debt allowance is reduced by three quarters of 1 percent. For more details see Kenneth R. Biederman and John A. Tuccillo, *Taxation and Regulation of the Savings and Loan Industry*, Lexington Books, 1976, Chapter 2.
home construction in their immediate neighborhood. Regulations brought legal force to what thrifts were doing already because they found it profitable. To finance their portfolios of long-term, fixed-rate mortgages, thrifts typically attracted savings deposits that had short-term maturities. Borrowing short and lending long was quite profitable because interest rates were stable and short-term rates were below long-term rates. This favorable interest rate environment lasted until the mid-1960s and made thrifts a booming and prosperous industry. Their assets grew from around $17 billion in 1935 to $111 billion in 1960, or twice as fast as the rate of inflation.

Economic Conditions Change. In 1966, the economic environment started to change. Short rates frequently rose above long rates and interest rates became much more volatile (Figure 3). With short rates relatively high, borrowing short and lending long ceased to be a sure way to make money. And with interest rates taking huge swings, thrift balance sheets and the housing industry both showed weakness.

Because most thrifts have locked themselves into fixed-rate assets, sudden upward movements in interest rates raise their cost of borrowing a lot faster than their average return on assets, squeezing their profit margins. But if interest rates decline, borrowers tend to pay off their loans and refinance at the lower rate. As a result, thrifts' yields on assets are more flexible downwards than upwards. Thrifts lose money when interest rates rise but they do not gain much when rates drop; the effect of volatility is not symmetric. Thus, on average, interest rate fluctuations impose a loss on thrift institutions.

Interest rate volatility also brought about more instability in the construction industry because the demand for housing is highly sensitive to mortgage rate fluctuations (Figure 4 overleaf). Since thrifts have been forced to concentrate their investments in mortgages and in limited geographic areas, they are highly dependent upon local housing markets. Lack of sectoral and geographic diversification helps to explain why savings institutions in the depressed Northeast are worse off than those in comparatively vigorous areas such as Florida and California.

The existence of a secondary mortgage market, however, makes it possible to reduce their exposure to local conditions by allowing them to take part in mortgage pools that consist of loans from different geographic areas.

7 insured S&Ls in the New York FHLBB district had an average net income-to-assets ratio of -.36 percent over the 1979-81 period, compared with .22 percent for the San Francisco district and .02 percent for the nation as a whole.

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FIGURE 3
SHORT RATES RISE ABOVE LONG RATES AS VOLATILITY INCREASES

<table>
<thead>
<tr>
<th>Percent</th>
<th>15</th>
<th>12</th>
<th>9</th>
<th>6</th>
<th>3</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Bond Yield (AAA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Paper Rate (4-6 Month)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Commercial banks suffer much less from rate volatility, since they usually are not as dependent upon a single local industry.\(^9\)

Regulations that restrict investments to mortgages thus are harmful to thrifts because they make these institutions vulnerable to interest rate fluctuations and to adverse conditions in their local housing market. When the interest rate environment started changing in 1966, regulators did not recognize that thrifts needed the opportunity to match more closely maturities of assets and liabilities and to diversify their assets in order to protect themselves against interest rate volatility. Instead, regulators decided to try to insulate thrifts further from the market. In 1966, Congress passed the Interest Rate Control Act which empowered the Federal Home Loan Bank Board (FHLBB) and the Federal Deposit Insurance Corporation (FDIC) to set deposit rate ceilings for all thrifts under their jurisdiction. These agencies were to coordinate their actions with the Federal Reserve's administration of Regulation Q, which imposes ceilings on commercial bank deposit rates. In this kind of regulatory environment, it was thought, thrifts would not lose funds to banks which had the flexibility to pay current market rates because of their shorter asset maturity.

For some time, Regulation Q was able to restrain thrift borrowing costs, but at the expense of more variable deposit flows. Each time market interest rates rose above the ceiling rate on thrift deposits, depositors in search of higher yields pulled their savings out of the thrifts and invested them with an unregulated institution or even lent directly to borrowers. Increased interest rate volatility in the 1970s created several episodes of this so-called disintermediation and caused severe liquidity problems for the thrifts. Although these rate-ceiling regulations were intended to help thrifts, they actually harmed these institutions over the longer run by preventing them from adjusting their policies to suit the new environment of volatile interest rates and increasing competition.

**What if Thrifts Had Not Been Regulated?**

This is not to say that if thrifts had been left unregulated, they all would have started to match maturities and to diversify their assets as early as 1966. Adapting to changing economic conditions is no easy task. Uncertainty about what changes are actually occurring and how to react to them makes it difficult to make timely decisions. However, there were several episodes of sharp interest rate movements during the late 1960s and early 1970s, and most thrifts no doubt would have learned the benefits of diversification and the costs of maturity mismatches by 1979, when interest rates became still more volatile.\(^{10}\) As a result, fewer institutions would have been hit as hard by recent interest rate fluctuations.

Support for this view can be found by comparing thrifts with institutions not subject to these constraints. Commercial banks, while they also were subject to Regulation Q, had wider asset powers and were able to diversify their assets and to eliminate most of their maturity gap.\(^{11}\) Their profits remained relatively unaffected by recent interest rate surges, while thrift profits took a dive (Figure 2, page 16).

Canadian trust and mortgage loan companies provide another interesting com-

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\(^9\) Smaller banks in states that severely limit geographic expansion, however, can also suffer from a lack of diversification when a single industry dominates their lending area.

\(^{10}\) In fact, the thrift industry has been lobbying for a variable rate mortgage instrument since the early 1970s, although what they were requesting probably would not have been "variable" enough to have protected them fully against recent interest rate fluctuations.

parison. ¹² Until 1978, most of their deposits had a maturity of five years. These institutions, although they specialized in mortgages that were amortized over 20 to 30 years, adjusted the rates on these mortgages every five years, so that there was no gap between asset and liability maturities. When customers started buying shorter term certificates in 1979, Canadian mortgage lending institutions issued one-year or two-year rollover mortgages, thereby again matching maturities. The few institutions that did not reduce the effective maturity of their mortgage assets incurred substantial losses and had to be merged into stronger firms. Most Canadian thrifts, however, avoided problems caused by interest rate fluctuations.

In short, stability in interest rates and the positive spread between long and short rates before 1966 made it profitable to borrow short and lend long. Portfolio restrictions that sanctioned this policy were not resisted by the thrift industry. Increasing interest rate volatility since 1966, however, pressured financial institutions to match maturities and to diversify their assets. Investment regulations and deposit rate ceilings prevented thrifts from adjusting their policies to this new economic reality and left them highly vulnerable to interest rate fluctuations and to local housing conditions. Thus a sizable body of opinion now favors a move toward deregulation. Disagreement remains, however, on how much to deregulate and how to handle the transition period.

DEREGULATION: CURE OR CALAMITY?

In response to recurring crises in the financial sector, the government has on several occasions commissioned studies on financial reform. These studies, such as the Report of the Hunt Commission (1970) and the FINE study (1976), concluded that only a lifting of deposit rate ceilings and a removal of many other regulatory constraints could assure the viability of the thrift industry. ¹³ Despite these recommendations, it took several major liquidity crises to bring home the message that most thrifts would not survive if regulations were not relaxed.

First Attempts at Deregulation. The initial response of the regulatory agencies to the problems of the thrifts focused on the ability of these institutions to attract deposits at market rates. Rather than removing existing Regulation Q ceilings, regulators authorized new types of liabilities without deposit rate


ceilings or with yields linked to rates of U.S. Treasury obligations of comparable maturity. These new deposits were not all introduced at the same time (Figure 5). A long-term deposit with no interest rate ceiling was authorized only in 1982, four years after the introduction of the six-month money market certificates.

In reaction to complaints by thrifts that these new instruments merely raised the cost of borrowing without improving their earnings capacity, Congress started expanding thrift asset powers. Part of this thrust was realized in the Depository Institutions Deregulation and Monetary Control Act of March 1980. The Act allowed savings and loan institutions to invest up to 20 percent of their assets in consumer loans, commercial paper, and corporate debt securities, while mutual savings banks were authorized to make commercial, corporate, and business loans up to 5 percent of their assets. In addition, the Act established the Depository Institutions Deregulation Committee to oversee the gradual phase-out of interest rate ceilings over a six-year transition period. More recently, the Thrift Institutions Restructuring Act of October 1982 authorized savings and loans to make commercial loans up to 10 percent of their assets and further broadened their asset powers.14 The Federal Home Loan Bank Board, in another regulatory change, allowed all institutions it regulated to issue mortgages with payments that can be adjusted on a regular basis. The interest rate on these Adjustable Mortgage Loans (AMLs) is tied to any index that is readily verifiable by the borrower and beyond the control of the lender. The effective maturity of an AML is equal to the period over which the interest rate is fixed. Since their nationwide introduction in April 1981, AMLs have grown in popularity to the point where they now constitute more than half of all newly issued mortgages.

These new asset and liability powers constitute definite progress in loosening regulatory restraints on thrifts. But they cannot produce a quick fix for the industry’s problems. Thrifts will have to invest time, energy, and resources in gearing up to take advantage of these new powers. Not all institutions will choose to get involved in each of these newly permissible areas. But some diversification seems almost a necessary condition if thrifts are to regain their long-run viability.

There Are No Alternatives to Deregulation. Although the need for deregulation seems clear, not all thrift industry representatives are equally convinced of its merits. Some thrift representatives, noting that their net worth started declining at the same time that regulators began relaxing deposit rate ceilings, view deregulation more as the cause of their problem than as the solution. They argue that the government should extend deposit rate ceilings, reserve requirements, and other regulations to unregulated competitors such as money market mutual funds.

The history of financial controls suggests that, although such a policy may have some of the intended effects in the short run, in the long run it will be ineffective. Whenever authorities try to limit voluntary exchange, people always seek ways to circumvent these controls. The emergence and continued popularity of commercial paper, negotiable certificates of deposit, repurchase agreements, Eurodollar markets, and money market mutual funds are partly due to the fact that each allows people to escape, to some degree, such regulations as deposit rate ceilings. And some of the same instruments allow institutions to avoid reserve requirements. Forcing money market mutual funds to operate under the same rules as commercial banks and thrifts would create incentives for financial

14 The Act permits greater thrift asset investments in nonresidential real property, state and local obligations, consumer loans, tangible personal property, education loans, and small business investment corporations.
**FIGURE 5**

**LEGISLATION AND REGULATION HAVE CREATED NEW FORMS OF LIABILITIES**

<table>
<thead>
<tr>
<th>Date in effect</th>
<th>Maturity</th>
<th>Ceiling* based on</th>
<th>Minimum deposit</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 1, 1978</td>
<td>6 months</td>
<td>6-month Treasury Bill †</td>
<td>$10,000§</td>
<td>Called “Money Market Certificate”.</td>
</tr>
<tr>
<td>July 1, 1979</td>
<td>2½-3½ years ‡</td>
<td>2½ year Treasury Security †</td>
<td>No minimum</td>
<td>Called “Small Savers Certificate”.</td>
</tr>
<tr>
<td>October 1, 1981</td>
<td>1 year</td>
<td>70 percent of 1-year Treasury Bill rate</td>
<td>No minimum</td>
<td>Called “All Savers Certificate”; interest is tax-exempt up to $1,000 for individuals and $2,000 for joint returns; expired December 31, 1982.</td>
</tr>
<tr>
<td>December 1, 1981</td>
<td>1½ years or more</td>
<td>No ceiling</td>
<td>No minimum</td>
<td>IRA and Keogh accounts only.</td>
</tr>
<tr>
<td>May 1, 1982</td>
<td>3½ years or more</td>
<td>No ceiling</td>
<td>No minimum</td>
<td>First step in Regulation Q phase-out schedule.</td>
</tr>
<tr>
<td>May 1, 1982</td>
<td>91 days</td>
<td>91-day Treasury Bill †</td>
<td>$7,500§</td>
<td></td>
</tr>
<tr>
<td>September 1, 1982</td>
<td>7-31 days</td>
<td>91-day Treasury Bill †; removed January 5, 1983</td>
<td>$20,000§</td>
<td></td>
</tr>
<tr>
<td>December 14, 1982</td>
<td>Available upon demand</td>
<td>No ceiling</td>
<td>$2,500</td>
<td>This “Money Market Deposit Account” allows limited third-party transfers.</td>
</tr>
<tr>
<td>January 5, 1983</td>
<td>Available upon demand</td>
<td>No ceiling</td>
<td>$2,500</td>
<td>Called “Super NOW Account”; allows unlimited checking, but is subject to a 12 percent reserve requirement.</td>
</tr>
</tbody>
</table>

*The actual calculation of the deposit rate ceiling is quite complicated. For details see Table 1.16 in any recent Federal Reserve Bulletin.
†Includes a ¼ of 1 percentage point advantage for thrifts over commercial banks.
‡Initially the maturity was 4 years or more. It changed several times until it was fixed at 2½ - 3 years on May 1, 1982.
§Reduced to $2,500 effective January 5, 1983.
markets to come up with still other unregulated liabilities.

Other thrift spokesmen feel that their current problems are temporary, and that all will be well again when interest rates come down from their historically high levels. They argue that since high and variable interest rates are the government's fault and since thrifts were essentially exercising a public mandate to specialize in mortgages, the government should subsidize thrift losses. Currently, government agencies provide some form of aid but focus mainly on merging failing thrifts into new entities (see DEALING WITH FAILING THRIFTS).

Several aid programs have been suggested by the thrift industry. Some involve direct aid in the form of outright cash infusions, subsidized loans, or mortgage warehousing (purchase of low yielding mortgages at face value). Others require regulators to assure that thrifts are able to maintain a certain minimum net worth position. Thrift arguments for aid are understandable, but the fact remains that a subsidy does not remove the ultimate cause of their problems—regulation. If the government bails out the thrifts without loosening regulatory constraints, they will still be vulnerable to future interest rate fluctuations.

The current programs to aid thrifts are designed to smooth the transition to a deregulated environment. After all, there does seem to be something to the argument that thrift institutions are not fully responsible for the dilemma they find themselves in. Perhaps more significantly, if no assistance were forthcoming, the severe difficulties of some individual institutions could have a spillover effect on others, perhaps including financial firms outside the thrift industry.

Still another reaction to deregulation is that it has happened too fast and has not proceeded in an even-handed manner. Thrifts' managers often feel that recent efforts at deregulation have not been well planned and that this is the worst of all times to change the industry. The current earnings crisis makes it difficult for thrifts to pay market rates on deposits and to invest resources and acquire skilled personnel to take advantage of their new asset powers.

No one can deny that the thrifts face high costs of adjusting to the new environment, yet it seems clear that the faster the financial sector is deregulated, the more quickly thrifts will be able to protect themselves against changing interest rates, cycles in housing construction, and outside competition. The losses incurred in the past are sunk and cannot be recouped by postponing deregulation, but they can occur again. The longer thrifts are restricted in their investment and funding powers, the more customers they will lose to commercial banks or to unregulated competitors such as Merrill Lynch, Sears, and others.

If stretching out deregulation over time has pitfalls, so does focusing on certain assets and liabilities for special treatment. The initial focus of recent deregulatory efforts was to relax deposit rate constraints on short-term liabilities. Although this step did help to lessen the outflow of savings towards money market mutual funds, it made the cost of borrowing more sensitive to interest rate fluctuations and did not allow thrifts to narrow their maturity gap. In short, it is not clear that this regulatory change helped rather than hurt the thrifts.

Some thrifts have argued that regulators should have given priority to new asset powers and should have postponed any further lifting of interest rate ceilings. Such a move indeed might have prevented a rise in the cost of funding, but it also would have prolonged the maturity gap (because thrifts would have been less able to extend long-

15 The Net Worth Certificate Act, as part of the Garn-St. Germain Depository Institutions Act of 1982, authorizes the FDIC and FSLIC to purchase capital instruments of thrifts with a net worth of less than 3 percent of assets.
DEALING WITH FAILING THRIFTS

Deposits up to $100,000 at most depository institutions are insured by either the Federal Deposit Insurance Corporation (FDIC) or the Federal Savings and Loan Insurance Corporation (FSLIC). Not surprisingly, these insurance corporations are the main government agencies in charge of dealing with failing thrifts. The FDIC and FSLIC can follow several alternative procedures when confronted with a troubled thrift. First, they can choose to liquidate the institution, acting as a receiver of the assets and making direct payments to insured depositors. Second, they can help the institution to survive on its own by providing subsidized loans or direct aid. Third, they can take over the institution, arrange for new ownership and management, or facilitate a merger, thereby protecting all depositors.

The first alternative — selling off the assets and paying off the liabilities — is a solution that the insurance corporations prefer to avoid because this option is usually the most costly. At liquidation, the tangible nonfinancial assets (such as buildings) will probably yield less than replacement cost, while the intangible assets (expertise, reputation) are destroyed in the liquidation. The liabilities, on the other hand, will have to be paid off at face value, not at the value they have to the institution as a going concern. The benefit of marking liabilities to market is lost. By mid-1981, this difference added up to an estimated $24.7 billion for the thrift industry as a whole.*

To avoid the high costs of liquidation, the FDIC and FSLIC usually have tried to provide direct assistance or to arrange a merger. Direct aid can take the form of outright cash grants, subsidized loans, or mortgage warehousing (purchase of low yielding mortgages at face value). To be effective, an aid program must be set up as a temporary device to help an institution bridge some transitional adverse conditions and should only be granted to thrifts that have a clear prospect of becoming profitable in the future. Compared with liquidation, direct assistance leaves insured depositors equally well off, but it provides a subsidy to uninsured depositors, to the owners, and to management; and if financial institutions expect the government to cover their losses each time things turn bad, they will be more apt to take excessive risks. To circumvent this problem, FDIC/FSLIC aid programs usually require increased stockholder participation, profit-sharing with the insuring agency, or increased supervision of management.†

A third approach that the insuring corporations are now using more frequently is merger of failing thrifts into healthier organizations. If the market net worth of the failing institution is negative, the price that the acquirer will pay is likely to be negative also: the FDIC/FSLIC will have to subsidize the acquisition. There are reasons to believe, however, that the acquiring firm will be willing to pay a premium above the failing thrift's going concern value. First, given that geographic constraints have created a multitude of small thrifts operating at less than optimal scale, a merger could lead to economies of scale.‡ Second, if the acquiring firm is not a thrift or operates in a different geographic area, diversification gains could be realized. Third, if the acquiring firm has superior management, the new combination could raise earnings due to increased efficiency. Fourth, nonthrifts could be attracted by the tax advantages that thrifts enjoy.§

To minimize the impact on their insurance funds, the FDIC/FSLIC must try to get the best price for the thrifts they put up for sale. This approach explains the insurers' recent efforts to attract not only healthy thrifts but also commercial banks, out-of-state institutions, and even nonfinancial firms as potential acquirers of failing thrifts.

‡For some evidence on these economies of scale, see James E. McNulty, “Economies of Scale in the S&L Industry: New Evidence and Implications for Profitability,” Federal Home Loan Bank Board Journal, February 1981, pp. 2-8. Andrew Carron calculated that more than 400 on average smaller thrifts should be able to save themselves by expanding through voluntary mergers (Carron, Chapter 2).
term liabilities). In addition, retaining ceilings would have made it difficult for thrifts to attract sufficient funds. Thrifts would have had the power—but not the funds—to make new investments. And while profits might have increased, the source of such a gain would be a continued subsidy from small savers who do not have the opportunity to escape the interest ceilings via a money market fund. Given the disruptive nature of an unbalanced process of deregulation, across-the-board reductions in regulations are preferable to deregulating one asset or liability at a time.

CONCLUSION

The current depressed condition of the thrift industry is the result of adverse economic conditions and years of regulatory constraint that left the thrifts unprepared for high and volatile interest rates, a slump in housing, and competition from other institutions. To regain their long-run viability, thrifts must be able to protect themselves by diversifying their assets, paying market rates on deposits, and matching maturities.

Many thrift institutions may not survive the long and hazardous road to a competitive financial system, but there is no alternative. Prolonging deregulation or deregulating selectively will only cause thrifts to lose many customers to nonregulated firms. Broadening regulations to include currently unregulated competitors would be ineffective, because markets always seem to find ways to circumvent financial controls. Providing aid without relaxing regulations would merely alleviate current thrift losses; it would not remove the ultimate cause of their troubles.
This new pamphlet outlines some of the many savings options currently being offered by depository institutions. Copies are available without charge from the Department of Consumer Affairs, Federal Reserve Bank of Philadelphia, P. O. Box 66, Philadelphia, PA 19105