

**RECORD OF SOCIETY OF ACTUARIES
1995 VOL. 21 NO. 4B**

PUBLIC GUARANTEE PROGRAMS

Moderator: HARRY H. PANJER
Lecturers: LORRAINE COTE*
SHELLEY KLEIN†
Recorder: HARRY H. PANJER

The presentation of this research report will provide a wealth of information about public financial guarantee programs (PFGPs). The research can be used as the basis for additional involvement of actuaries in planning and managing PFGPs.

MR. HARRY H. PANJER: This session is devoted to discussion of a research project initiated by the SOA research department in response to a brainstorming session by a number of leaders of the profession. This group thought it was important to take a look at the extent of PFGPs and to consider actuarial responses to the growth of those programs.

The study was conducted by Price Waterhouse in Washington, DC. Two of the key researchers, Shelley Klein and Lorraine Cote, are with us. Shelley Klein is a senior manager at the Price Waterhouse Office of Government Services in Washington, DC. He holds a master's degree in public policy from the John F. Kennedy School of Government at Harvard and a bachelor's degree in political economics from Princeton. He's on the board of directors of the Multi-Family Housing Institute and previously has been with the Joint Center For Housing Studies at Harvard, the Enterprise Foundation, the City of New York Mayor's Office, and Smith Barney.

Our second speaker is Lorraine Cote. She's a senior consultant with Price Waterhouse. She holds a master's degree in international management from the University of California at San Diego and a bachelor of arts degree in political science—international relations from UCLA.

Following the presentation, we'll have plenty of time for an open discussion on actuarial considerations of public financial guarantee programs and possible follow-up projects. This project resulted in a document about one inch thick. Its current draft is at the SOA office and is being turned into a form available for public distribution later on this year. [Editor's note: The PFGP monograph is available from the Society's Book and Publications department at 847/706-3526 or via e-mail at: ccimo@soa.org.] Without further ado, I'd like Shelley to begin.

MR. SHELLEY KLEIN: Price Waterhouse ended up doing this study. As maybe some of you know—and I don't know what backgrounds you all come from—Price Waterhouse has been involved in doing analyses of federal credit programs for quite a while, including what is called the actuarial review of the Federal Housing Administration (FHA) mutual mortgage insurance (MMI) fund, which is the FHA single-family insurance fund.

*Ms. Cote, not a member of the sponsoring organizations, is a Senior Consultant at Price Waterhouse in Arlington, VA.

†Mr. Klein, not a member of the sponsoring organizations, is a Senior Manager at Price Waterhouse in Washington, D.C.

RECORD, VOLUME 21

That annual actuarial review involves a lot of economic and financial analysis; then Sam Gutterman, who is now the SOA President, gives his actuarial seal of approval to the study. Through the process of doing those studies, we became very familiar with federal credit programs. That's how we ended up doing this study.

I'll give an introduction to federal credit programs and a little of the history, and then Lorraine will cover the methodology that we used to undertake the study. We'll give you a little taste of the program descriptions and statistics that are in the report. Then we'll talk about how we categorized them for the purposes of organizing the many programs into categories that were useful to think about. Then we'll discuss a few conclusions. I guess our hope is that the brief descriptions that we'll give of what we actually found will elicit some questions from you.

I'm going to assume a limited level of knowledge on your part. Some of you may know more about these programs than I do, but for the sake of being able to target the presentation at one level, I'll assume you only know a minimal amount. The purpose of PFGPs is to facilitate the investment of private capital in a market in which there's the perception of some sort of market failure and some public interest at stake.

The point is that, rather than inject public capital directly into this market to produce whatever the desired outcomes are, the government intercedes by providing guarantees that encourage the private sector to invest. Reasons why the private sector might not be investing could be that quite often it's an information issue, it is difficult to measure risk, or it's a new area that has not traditionally had private capital involved. To generate private interest, the federal government will say, "We're going to provide a guarantee so that people will be willing to put some of their capital at risk."

Although I keep on focusing on federal initiatives, we also looked at state programs. Wisconsin turned out to be the state we selected because it was fairly typical, as states go. It's not too big nor too small. We also looked at Canada and at the province of Ontario. My tendency is to focus on the federal ones because those are the ones I know best, but we did look at a wide range.

The purpose of these programs, whether federal, state, Canadian, or provincial, is basically always the same. It is to facilitate investment without the government having to actually put in the investment. The purpose of the study is for actuaries to have an interest in these programs because it is actuarial analysis, such as for the FHA MMI fund, that is used to come up with estimates of how much risk the government has exposed itself to.

One of the appeals of these credit programs, obviously, is that they don't require laying out a large amount of money upfront. They're a relatively painless way for government to pursue desired outcomes. The original programs, however, were primarily housing programs in the 1930-40s when, as you may know, the housing market collapsed. The Great Depression was the reason for the housing market collapse, but the housing market collapse was exacerbated by the fact that private mortgage insurers had basically been in a speculative business. They were selling participation in sort of a nascent mortgage-backed security industry in the 1920s. They were completely uncapitalized, however. They weren't particularly regulated, and they were uncapitalized. As a result, when housing values crashed through the

PUBLIC GUARANTEE PROGRAMS

floor, these private mortgage insurers were completely wiped out. There was no private mortgage insurance and, to the extent that the banks had money to lend at all, they were unwilling to lend in an environment in which house prices were dropping on a regular basis. The federal government became involved because there was essentially no liquidity at all in the housing market, and that was driving prices down further. The government intervention was to provide liquidity in the housing sector.

In the 1950s, the new programs tended to be in agriculture, rural development, business, assistance to businesses, and assistance to export businesses that were exporting. In the 1960s, these programs moved into foreign investment, international aid, education, and health assistance. You actually can sort of see a pattern of what the issues of the day were—they were the places where these credit programs ended up being developed. Of course, in the 1970s there was energy assistance, transportation, and fiscal relief. Energy assistance was actually assistance in developing energy sources.

Then in the 1980s there was actually a little shift. Not many new programs were being developed, though there are new programs within these different types of programs, different variations. What happened in the 1980s that was significant for financial guarantee programs was the savings and loans (S&L) crisis and some other crises or scandals, particularly related to the Department of Housing and Urban Development (HUD).

The S&Ls are not exactly a credit program, but the federal insurance of them was the reason that the S&L crisis became a big public expenditure of funds. That caused people to think about the fact that when we make a promise to back a certain financial market, and if that financial market gets in trouble, we actually are going to have to pony up some money. Nobody had thought that through about many of these programs. They were an easy way to intervene without having to be too serious about what kind of liabilities the government was taking on.

Folks started looking around and realized that there were many billions of dollars worth of guarantees and got a little bit nervous. At the same time, there were the HUD scandals in which many guarantees were being used for purposes that were not quite what the original intent of the programs were. The 1980s brought a spotlight onto federal guarantees and to state guarantees as well. I can only assume that Canada was similarly concerned.

These programs had grown dramatically over the course of the 30–40 years that they had been in existence. One of the reasons they had grown dramatically is because their budget treatment was such that people had to pay for only the salaries of the people administering them when they created the program, and at the time, they actually guaranteed a loan. When there was a default, they had to pay for that, but that didn't have to be budgeted in advance; so these programs looked costless at their inception. That all changed after the 1980s and the S&L crisis and the other financial dislocations of the late 1980s. Congress passed the Federal Credit Reform Act of 1990, which required that credit programs treat the extension of credit as a direct budget outlay to the extent of the expected losses associated with each individual loan. The term is credit subsidy, and each program had to undergo some analysis to

RECORD, VOLUME 21

determine what the credit subsidy associated with a loan was. That amount of money has to be budgeted as each loan is guaranteed.

This was a tremendous change for these programs. For the first time they had to start thinking about themselves as being explicitly a subsidy. In the past, they probably had not thought of themselves as being subsidy programs. They thought of themselves as being facilitators of the private market, but there was implicitly at all times a subsidy going on because any losses under those programs were being covered by the federal government.

Some of the programs required a payment of fees. Those fees may exceed the losses, in which case there is what is called a negative credit subsidy. Budget-speak is often very complicated and counterintuitive, but a credit subsidy is the amount of money the federal government is spending to support a credit program. A negative subsidy refers to programs that actually make money, an example being a Ginnie Mae, and its guarantee is a big moneymaker of about a half billion dollars a year in negative outlays or negative credit subsidy. The Federal Credit Reform Act of 1990 changed the playing field quite a bit. It required people to start thinking more directly about what the government was actually spending on these programs. As a result, these programs got a great deal of attention. Quite a few of them have been slowly phased out, as it became apparent that these were more cost more than the government actually wanted to spend.

The other thing is that the Federal Credit Reform Act, because of the analyses that were required for compliance, required agencies to start collecting and maintaining data in a way that they had never really done before, which is good news for us economists and you actuaries. It now means that there are data on the performance of these loans that can be analyzed for the purpose of establishing what the relationships are between loan characteristics and performance, which enables the programs to tailor themselves a little bit more carefully to the purposes that they're supposed to serve while trying to minimize what their ultimate credit subsidy is.

It has allowed for a revolution in these programs in terms of their knowledge of where their risks really are, which has enabled them to try to isolate those risks and figure out how to deal with them. In some cases, there is no way to eliminate them, but understanding them better allows for better public management. Lorraine will pick up from here and talk about the methodology.

MS. LORRAINE COTE: I'm just going to talk a little bit more about what we did to get at these programs. The first thing that we had to do was identify which programs we were going to look into. We made a decision early on, in order to best utilize our time, to look at indirect programs, actually explicit guarantees, that the federal government was making to financial institutions that were issuing these loans. But we also decided to go ahead and look at the direct programs when they were directly related to a guarantee program. Often these programs have an indirect guaranteed program in which a financial institution will go ahead and make that loan, but in some cases financial institutions are not willing to take on the risk even with the federal guarantee, because it's not usually 100%, and they'll have to issue a direct loan. We went ahead and looked at those.

PUBLIC GUARANTEE PROGRAMS

The first thing that we did to identify the program was to look at the easiest ones, which are the U.S. federal programs, they're well documented. We used the federal credit supplement, which is done by the Office of Management and Budget (OMB), as well as the 1996 presidential budget.

For the states, we had a little more trouble. Shelley talked a little bit about why we chose Wisconsin. It is a fairly average state—average in size and average in complexity—but the other reason was because its guarantee programs were a little more explicit. They fall under the Wisconsin Housing and Economic Development Authority (WHEDA), so they were all at least administered in one place. Many states that we talked to didn't even really have a list of where all their financial guarantee programs were and told us we would have to call all the agencies. It was easier to try and deal with one entity: WHEDA.

Then we looked at the Canadian federal programs. Those are also listed in the document created by the Department of Finance, which is called the Guide to Federal Programs. We did interview some public officials to see if there were any other sources or programs that we were missing. In Canada, some ad hoc loans, as they call them, are made and we did not look explicitly at those. They vary completely from being a loan to a company to help it out if it is having trouble to being a direct loan for something else. We did not look at those at all.

On the provincial level, we chose Ontario. It's one of the largest Canadian provinces. Everyone we spoke to thought that was the one we should probably use. To find out some information on that one, there is a guide called Quick 1993–94. It's an index to services, and we interviewed some people.

We obtained some of the information, once we had identified the programs, through literature searches. Some of the same documents in which we had identified the programs had a great deal of information about the programs. We also used the federal guide for the U.S. programs. At least two of these programs provide a description. It's for people who are looking to participate in any of these programs, but it was also helpful to us. We interviewed everyone in the agency who would talk to us about these programs. There were no programs for which we just used literature. We solicited many materials from the agencies. Many have direct pamphlets about the programs.

Our next task was to present the data in a way that we thought would be helpful to someone who was just reviewing it quickly. There's a lot of information. Obviously, there are a tremendous number of programs. We decided to break it up into two ways. We did it on a matrix structure and made two matrices. One was a descriptive chart that gives the objective of the program and some of the things that needed to be explained in more verbal or textual way. Then we did some numerical charts. These give the numbers of how many loans are made, what that recycle of the loan is, what rate the loan is given at, and those types of things.

Our last task, and I want to talk a little more in detail about this, too, was to categorize these programs, not just read them from an alphabetic list, but be something that had some meaning and be helpful to someone looking at them. I'm going to go

RECORD, VOLUME 21

through the descriptive chart and show you. This is just one program. There are pages and pages of these in our document.

We're just going to take one example. Table 1 is the mutual mortgage insurance (MMI) fund. These are all the categories that are in the descriptive chart. The objective, as you can see, explains why this program was established, what it's trying to do, and what the eligibility requirements are. The MMI fund is good for anyone who's able to participate in this program. Many programs have a requirement for a U.S. citizenship. Some of the Native American funds need proof that the person is a member of a specific tribe. Some have very specific eligibility requirements. The MMI fund requires that the property be a security. Some of the other funds, such as the department of education for the student loans, don't have any security at all. Some of the tables say "none." Then how are the funds utilized? Sometimes it's very close to the objective, but sometimes it's very specific. For the MMI fund, it's to buy a house. Basically, I think it's straightforward.

Then there are the determinants of borrower interest rate: this is where we reflected any subsidies that were given. For this it was simply the market rate for the MMI fund. But many of these do it 1% below the prime, or 1% above the prime, or a quarter a point. That's stated explicitly in the tables.

TABLE 1
FHA GENERAL AND SPECIAL RISK
AND THE MUTUAL MORTGAGE INSURANCE FUND
DESCRIPTIVE CHART

Loan program	203(b) MMI insurance
Objective	To assist buyers with good credit history to finance the acquisition of one-to-four family housing that is existing, proposed, or under construction
Eligibility requirements	Any individual able to make the cash investment, the mortgage payments, and the credit requirements; usually limited to owner-occupants
Security requirements	The mortgage on the property
How funds are utilized	To acquire existing one-to-four family housing that is existing, proposed, or under construction
Determinants of borrower interest rate	Market rate
Factors contributing to defaults	Median household income, unemployment rate, constant quality house price appreciation index, FHA interest rate, LTV and loan size categories, legislation affecting homeowners
Loans made/guaranteed in FY 1994	1,217,015

Regarding the factors contributing to default, as we were going through, we talked to the agency personnel to determine what they thought the biggest factors contributing to

PUBLIC GUARANTEE PROGRAMS

default were. Then we also talked about it amongst ourselves and tried to figure out at the different periods what it was going to be. Obviously, for a housing fund, there is the unemployment rate, housing prices, appreciation, interest rates, loan size categories, and then any legislation that affects homeowners in the way of taxes at the federal, state, or local level.

With regard to loans made or guaranteed, for the MMI there were 1,217,015 loans made in fiscal year 1994. We used all the fiscal year 1994 data because the data for 1995 were not compiled yet. You'll see that for some of these programs, it's over a million and for some it's one. Only one loan was made last year.

The numerical charts took a little more effort in terms of getting the data, but in some ways it's a little bit more helpful. For the MMI program (Table 2), there's the loan limit. Some of these programs have no limits. Others have very specific limits—\$50,000 in any given year. It depends on what the objective of the program really is.

TABLE 2
FHA GENERAL AND SPECIAL RISK
AND THE MUTUAL MORTGAGE INSURANCE FUND
NUMERICAL CHART

Loan program	203(b) loan program MMI insurance single family insurance
Loan limits (FY 1995)	Lesser of \$151,725 or 90% of the median house price of a given county (single unit)
Interest rate (FY 1996)	Market rate
Fees (FY 1996)	Upfront 2.25% Annual 0.5%
Baseline subsidy rate (FY 1996)	- 2.27%
Average loan size (FY 1994)	\$75,260
Projected dollar value of loans (FY 1995)	\$41,580,000
Assumed default rate (FY 1996)	8.00%
Guaranteed (FY 1995)	99.00%
Losses (FY 1994)	\$1,784,000,000
Maximum loan length (years)	30
Total value of loans outstanding (end of FY 1994)	\$304,708,000,000

RECORD, VOLUME 21

Regarding the interest rate, again, it can be market rate or it can be something that is subsidized by the agency. For this situation, if it was not market rate, some of them have fixed interest rates. It's 6%, period, no matter what the prime rate is. So we put those in.

Some of these programs have fees and a participant in the program is charged an up-front fee and an annual fee to stay in the program. Others don't have any fees at all.

Shelley talked a little bit about the baseline subsidy rate. This is calculated by the Office of Management and Budget as a result of the Federal Credit Reform Act. We only have these four U.S. federal programs. Canada is working on establishing something similar, but has not yet gone through that process. MMI is obviously possible. It has a negative baseline subsidy rate. Some of these others have high baseline subsidy rates, and the program is giving a lot of money to run this program.

We put the average loan size in just to reflect how some of these programs only have one loan, and some of the loans are quite big. For others that have many loans, the loan size is very small, especially in the programs that have very specialized interest.

Regarding the projected dollar value of loans, when used in comparison with some of the other programs, you can tell which programs are growing and which aren't. Some of these programs have been around for a long time and have very high values of loans outstanding, but they are not necessarily continuing. You can see that the projected value for next year is small.

The average assumed default rate was 14.8%, but you can see all the different ones. This came directly from the federal credit supplement.

In considering the percentage guaranteed, this MMI fund happens to have a 99% guarantee. Most of them are between 80% and 100%.

Losses actually refers to claims net of recovery. We thought that this category would be helpful to anyone who is potentially planning on doing an actuarial review of any of these programs. The losses are not actually specifically published, and so this came straight from the agencies. Some of the agencies were very reluctant to give us this information because it's politically sensitive. Then other agencies wanted to push some loans. They weren't really claiming until next year, even though they were sure they had already defaulted. This number is susceptible to a little bit of political maneuvering.

The maximum loan length is straightforward. The last column is the total value of loans outstanding as of FY 1994.

FROM THE FLOOR: What was the percentage guaranteed? What did that 99% represent?

MS. COTE: It represents the percentage that the federal government or any government is guaranteeing to financial institutions. For example, if it is 80% and the person defaults, the federal government is only liable for 80% of it.

MR. KLEIN: In that particular case, it's actually officially 100%, but we put 99% because there are certain legal costs and one or two months' worth of interest costs that

PUBLIC GUARANTEE PROGRAMS

are not reimbursed. So although officially FHA insurance is 100%, it really ends up being closer to 98% or 99%.

The other thing I want to point out on Table 2 is that where it says "Losses." If you've been following along, you might be a little confused. Why does it have a negative subsidy rate and losses? The reason is because those losses assume no premium income. That's just the difference between the claims paid out and the recoveries made by selling the properties. What ends up happening is that there are losses in the process of doing the business. They charge borrowers a premium to cover those losses, and it happens that premium more than covers those losses. Income in fiscal year 1994 was something along the line of \$150–200 million, which means that basically premium income in that year was somewhere along the line of \$2 billion.

I'm going to introduce categorization and then Lorraine will go through the details. One of the points of doing the study was to try to think of ways to organize these programs along various different characteristics that would make it easier to analyze if anybody wanted to. Also, it would make it easier to compare across them, because they had shared characteristics. These are the six we came up with. There are, of course, an infinite amount of potential categorizations. The following list consists of the six that we thought were particularly meaningful:

Categorization

- Dollar value of loans outstanding as of fiscal year 1994
- Origination date
- Projected dollar value of loans originated in fiscal year 1995
- Maximum liability
- Default rate
- Objective

The dollar value of loans outstanding as of fiscal year 1994 means all the loans that have been guaranteed in the history of the program. Lorraine will go through what we actually found in each of these areas, but broadly speaking, I'd say that it shouldn't be a surprise that the oldest programs tend to have a higher dollar value of loans outstanding, and those are housing. The total amount of guarantees is something like \$2 trillion. About half of that is housing, maybe even more than half.

The origination date means when the program was originated. That's useful for the purpose of thinking about what the issues were that generated interest in having a program. The projected dollar value of loans that originated in fiscal year 1995 gives us a measure of whether these programs are alive or dead.

Maximum liability gives us an idea of what it means when we say we have \$1 trillion worth of guarantees. Does that mean the government is potentially going to lose \$1 trillion if there's a bad day in the real estate markets? The default rate is not available on all programs. It is another way to get a handle on how much risk the government is taking on.

Objectives refers to housing, education, or agriculture. Lorraine will go through the details on each of these.

RECORD, VOLUME 21

MS. COTE: We were trying to get at size, risk, and objectives on these categorizations. We were just trying to take a base cut at putting these things into some type of category. For the value of loans outstanding, as Shelley said, it's no surprise that the oldest programs are the largest. The biggest ones are the ones that are addressing housing issues. The largest is Ginnie Mae, and it had approximately \$445 billion of guarantees outstanding as of fiscal year 1994. These housing groups, when you put them altogether, have two to three times more loan portfolios than the next set of programs.

The next set of programs happened to be education and agriculture programs. The Stafford loan program, the unsubsidized and subsidized, for example, has about \$51 billion of guarantees outstanding; so it's much smaller than the largest housing programs.

In Canada, the objectives of the programs, in terms of how large they are, varies a bit. The biggest programs are not housing programs. They're actually education, small business, and agriculture related. The student financial assistance program is the largest. To give you a feel of where the Canadian government is in compared with the U.S. government, its biggest program has about \$5 billion in loans outstanding; so it's much smaller on the whole.

The smallest programs in the U.S. and Canada are those that address really specialized needs. One good example is the maritime administration in the Department of Transportation. It addresses the needs of refitting ships and shipyards. Probably one or two loans are made each year, and in some years none are made. It's a very small program.

The housing programs have been around since 1934, which Shelley mentioned earlier in the background section, so the fact that they have larger values outstanding is not surprising. Many of the newest programs are just changes to existing programs that they've now issued as brand-new programs. The objectives really have not changed very much. Most of the education programs date to around 1965. Agricultural programs are older—dating from 1938—and right after housing programs.

Because some of these programs have a large dollar value of loans outstanding, they may not be issuing loans anymore because new programs have come along and are taking their place because some deficiencies were found in the existing programs. Some of these are the same. Many of the housing programs are still the largest. They have three to five times the projected value of education and agriculture. Again, to give you an idea, Ginnie Mae, as projected for 1995, is \$94 billion, and the Stafford loan program is about \$12 billion, these are much bigger.

In Canada, though, the newest federal program is related to agriculture, and it's growing faster than any other program. It has \$752 million of projected loans for next year, which means that it will soon outpace the biggest program, which is education. Ontario's largest programs are also agriculture. They're growing at about the same rate that the federal programs are growing.

How much could these programs potentially lose if everyone defaulted. We don't think that's going to happen, but because they're guaranteed at such high rates, 80–100%, which we mentioned earlier; the numbers are staggering. Ginnie Mae, again, has the largest liabilities, \$445 billion. If everyone were to default now—and that's not going to happen—that gives you an idea of what's there. In the U.S., housing is the largest

PUBLIC GUARANTEE PROGRAMS

liability. In Canada the largest liability is related to education, small business, and agriculture.

MR. KLEIN: One thing to keep in mind with the liability issue: with the housing programs, although Ginnie Mae might have \$450 billion worth of liability, were all of those loans to default at the same time, the government would then own that property and presumably it would be able to recover some of that value by selling the property. Although if all \$450 billion defaulted, I guess that there might not be much of a market for anything.

MS. COTE: The ones with the bigger risks are the ones that don't have a guarantee or don't have any security to back them up. That \$12 billion in outstanding Stafford loans includes students, and if they can't get a job when they graduate, they're going to default.

The average default rate, as I said before, is 14.8%. The interesting thing about this is that the largest programs generally fall well below that 14%. Ginnie Mae, for example, has 0.03% of default, it's small. The Veterans Administration education loan fund has a 75% default rate, the USAID housing default rate is 47.32%, and the Small Business Association Microloan program has a 32% default rate, these are high. These programs may not top the list of maximum liability but, obviously, the baseline subsidy rate on many of these programs will be much larger.

Canada, Wisconsin and Ontario, on the whole, had between a 0% and 3% default rate on most of their programs. They're a little bit smaller than U.S. federal programs. I think that they can administer them probably a little bit better, but it shows you where the U.S. is relative to them.

We've talked a little bit about the objectives of these programs. U.S. agriculture had 10 programs. There were 24 in economic and business development. Obviously that's a fairly big category. Education was 11 and environment was 4. This is a new category. Housing was 31, so housing, by far, is the biggest.

In Canada, it's very different. The biggest programs are agriculture programs with five. There were two economic and business development programs. In education and housing, there was only one each. The federal education program in Canada is very large, but only one exists; whereas the U.S. has eleven.

MR. KLEIN: The conclusions are that there are many credit guarantees out there. Is there the risk of some sort of disastrous financial outcome? Probably not, primarily because, overwhelmingly, the volume of guarantees is in secured insurance, which is in housing. There is a lot of risk in some of the areas. Education is a perfect example of an area where there's no security. In a harsh economic downturn, we could easily imagine very large default rates on educational loans. So there is risk out there. We're doing a better job now because of credit reform and getting a handle on that risk, which is good news.

There is debate over these programs. Each program has a debate that goes on both sides of the issue. On one side, people say that the federal government shouldn't be involved in this market, whatever the market is, because the reason private sector isn't providing as much capital as the government wants in this market is because it's not profitable or

because these are inefficient investments. If the investments are inefficient, then the government shouldn't be encouraging them.

The counterargument is that socially optimal outcomes are not always the same as economically efficient outcomes. Housing is an excellent example of federal intervention in a market where the private sector has feared to tread. Over time this has created a private market that's the biggest capital market in the world, outside of U.S. Treasuries.

Once they determined that they could make money in that area, they got involved. Whereas when the FHA began, basically every housing loan that was made had FHA insurance on it, in essence. The FHA's share of the market is relatively small, because the private mortgage insurers have taken a much larger share. I use that example because it's one that I'm very familiar with, but those are the two sides of the argument. One side is saying that federal intervention is causing investment in inefficient markets, and the other side is saying that federal intervention is allowing markets to develop and is encouraging investment in areas where otherwise there might not be any. I suppose that's a conclusion. If anybody has any questions, we'll be happy to answer them.

FROM THE FLOOR: I detect from your presentation that these credit programs, you feel, develop a cost, and it's an implicit cost, typically, and not an explicit one. For example, the public isn't aware of the cost and even the politicians, when they create these programs, aren't aware of the costs. In that context, to the extent these programs can be quantified and displayed, it really would enhance a businesslike approach to develop solutions to public problems.

MR. KLEIN: That's true and that's actually why the Federal Credit Reform Act was passed—to require these programs to report what the implicit subsidy is. So that is now part of the federal budget in what Lorraine referred to as the federal credit supplement. It outlines each program, telling what the outstanding liability is and what the baseline subsidy rate is for each program. That information is now being provided, whereas it was not in the past. It's not required of states. For instance, Wisconsin doesn't have a similar type of reporting mechanism. I know that some states have moved in the direction of trying to make that information more transparent to the public.

MR. FREDERICK W. KILBOURNE: To just understand the focus, it is financial guarantee programs as such; so this does not include, for example, under agriculture, any agricultural subsidies or payments to not grow certain crops or anything such as this. You're talking about financial guarantees. It does not include federal flood insurance or emergency coverage for hurricanes and things of that nature.

MR. KLEIN: No.

MR. KILBOURNE: As far as deposit insurance, would I understand that it does include the FDIC?

MR. KLEIN: We didn't include the FDIC; PBGC; or Federal Savings and Loan Insurance Corporation (FSLIC).

MR. KILBOURNE: Is there any state deposit insurance? Much of it fell apart half a dozen years ago or so.

PUBLIC GUARANTEE PROGRAMS

MR. KLEIN: I'm sure that some states still insure banks chartered in the state. Didn't Rhode Island have a big problem a few years ago with its association?

MR. KILBOURNE: Yes. Then if I understand correctly, the \$2 trillion is the outstanding liabilities of all the loans that are guaranteed. Was this U.S. federal?

MR. KLEIN: That's U.S. federal, yes.

MR. KILBOURNE: Then, of course, the probability that the cost would be \$2 billion is perhaps very low, but it would be whatever proportion was uncollectible. Then there would be the salvage that you talked about.

MR. KLEIN: Right.

MR. JAMES F. ABRIL: I have a question on the 14.8% default rate. A number of that size, when compared with \$2 trillion outstanding, just struck me as being a very large cost. I wonder if you could follow up or give some detail on what that 14.8% refers to and how it was derived.

MS. COTE: That 14.8% is just a weighted average of the programs that we looked at, because some of the programs have such high default rates. It's calculated by the OMB, too, for U.S. federal programs.

MR. PANJER: I guess I'll just add a clarification to your question. I think you were going to ask the same thing. Is it dollar weighted by the size of the program or the exposure base? Or is it the average overall?

MS. COTE: It's the weighted average.

MR. PANJER: It really is? Even though you said that the largest programs had very small defaults, the average is still 14%?

MS. COTE: Right.

MR. KLEIN: The thing to keep in mind, though, is that, for instance, even though the FHA and Ginnie Mae together constitute about \$700 billion worth of guarantees, Ginnie Mae has essentially no defaults whatsoever. I don't remember what the average rate for the FHA was, but it's probably something along the lines of 10% over the life of the loans.

MS. COTE: I'll have to look that up.

MR. KLEIN: The thing to keep in mind about the FHA, for instance, is that the losses on a default are not 100% of the value of the loan. The average loss on a loan is around 35%. The FHA's overall default rate over the life of a portfolio is 8%. On that 8%, the average loss is 37%, so you're really looking at something along the lines of 2.5% losses. The premium on FHA upfront is something over 3%, so that shows why it is covering its costs.

RECORD, VOLUME 21

MR. KILBOURNE: That provokes another question, I guess. Does it have funds set aside in assets to reflect that excess of premiums over the apparent costs?

MR. KLEIN: It has built up capital. In fact, it was legislatively required in the Housing Act of 1989 to build up a certain amount of capital. It had capital, but there was some concern that it might not be sufficient capital to withstand some sort of serious dislocation in the housing market. The original Price Waterhouse study assisted Congress in coming up with a 2% capital requirement. It has reached that at this point and actually continues to build capital because it continues to make money.

This is going to be a political question that will be addressed on Capitol Hill over the course of the next year or so. If it is at its required capital amount and continues to build more capital, the question becomes, Should it lower the premiums? The FHA's answer is to let us keep that money and use it to cross-subsidize other programs. Congress is not particularly pleased with that concept; except that if it allows that to happen, then it doesn't have to worry about the budget implications of having to provide direct subsidies to those other programs.

MR. KILBOURNE: Of course, Congress could always take the money, require it to loan the money to the FHA for other unrelated spending, or direct certain kinds of loans for political advantage.

MR. KLEIN: There's a conflict on the Hill right now between those Republicans who believe government shouldn't be doing essentially anything and those who are focused on the budget deficit. In the case of the FHA, those are conflicting goals because the FHA makes money. If government gets out of the business of doing housing, it actually ends up losing somewhere between one half billion and one billion dollars a year. That has to be made up somewhere. The deficit cutters don't want to touch the FHA. Those ideologically opposed to government involvement in markets do want to touch the FHA and they're fighting. The Republicans are fighting it out among themselves.

MR. KILBOURNE: I see. Let's see if my understanding is correct of the Stafford loan program, and the education/college loans. If I recall, you indicated that about \$12 billion of such loans are out and that the historical default rate has been about 32%. I assume there's essentially no recovery.

MS. COTE: On the Stafford loans, I think it's actually about 32%. About \$12 billion is outstanding, and there's no security on those because they're education loans.

MR. KILBOURNE: OK. That would mean that the public or the taxpayers have a current, unrecognized, unfunded liability of approximately \$4 billion, if the prior default rates hold into the future.

MS. COTE: Right.

MR. KILBOURNE: The other consideration I'd like to mention, of course, is with the FHA. If we assume a default rate of 8%, I think you said, with an average loss of something such as 37% of the face value, if that were to be set up as a liability and then the assets were taken out of premiums, there would be a balance at a certain level, provided the 37% and the 8% held up. But if we had a cycle—let's call it the depression

PUBLIC GUARANTEE PROGRAMS

again—there is no extra provision for that, except to the extent that the capital is risk-based capital; that exceeds just the historical averages. If there is a depression, the default rate will certainly be more than 8%. In California now, for example, especially Southern California, housing values have fallen to an extent that I presume is showing up in some of the statistics that you're dealing with.

MS. COTE: Actually, the default on guaranteed Stafford loans is 21%, and they're guaranteed for 93% of their value.

MR. KILBOURNE: Oh, all right. Is there a trend in that 21%?

MS. COTE: I don't know.

MR. KLEIN: Actually, now that the federal government has moved in the direction of doing direct lending rather than guarantees on student loans, the expectation is that the performance will be better because it is limiting. The lion's share of the defaults come from these industrial technical schools. A great deal of it, frankly, is fraud. The schools bring in students. They don't train them, but they're guaranteed to get a loan. The schools take that loan money and don't train the students particularly well for anything. Those students don't get jobs, and they don't pay their loans. The government is trying to make it more difficult to do that by decertifying many of those schools.

On the FHA issue and, actually, on the previous issue in which you mentioned an unfunded liability, I'm not sure whether the Stafford program is an unfunded liability. Credit reform required that reserves be set aside for expected losses. My guess is that the Department of Education probably has a substantial reserve set aside for expected losses in the future.

I know that the FHA has reserves set aside over and above the capital that it was required to build up. That capital ratio of 2% was calculated by running simulations of the future performance of the FHA's funds through a fairly substantial recession—basically, a national recession of the severity of the Texas recession in the Texas oil bust. The capital is a cushion that's designed to deal with a lot of stress. Of course, if there's a depression, we'll have bigger problems to deal with.

MS. COTE: The OMB-recognized baseline subsidy rate for the Stafford program is 24%.

MR. KILBOURNE: Twenty-four percent?

MS. COTE: Yes, so that's money that it is actually required to come up with.

MR. KILBOURNE: What about loan forgiveness for public service? Is that just financed out of direct government revenues? Doesn't it have that? You don't have to pay if you work as a teacher or something.

MR. KLEIN: I'm really not sure how it accounts for that.

FROM THE FLOOR: Just an observation. We're possibly confronted with deficits, with actuarial public debts in the area of Medicare, with the Social Security systems, and with

RECORD, VOLUME 21

the new system being balanced and not balanced, it seems, every five years. Are you able to characterize your exposure or your potential costs of these programs?

MR. KLEIN: I think there's much more exposure in Social Security and healthcare than there is in these. For the most part, credit reform definitely identified some places in which there were problems. You can find default rates that are ridiculously high. In essence, those programs are grant programs. They are called credit programs, but when you come right down to it, if there's an 80% default rate, that's a grant program. But those tend to be small programs, and there's not a tremendous amount of liability there. Basically, the government has accounted for them. I don't pretend to be an expert on Social Security or Medicare, but those are billions and billions of dollars worth. It's not a question of there needing to be a crisis for that to happen. That's going to happen.

FROM THE FLOOR: It's interesting that in dealing with both Medicare and Social Security programs, one week they'll be on the table and another week they'll be off the table. It goes back and forth, depending on the political climate and the political will to deal with the problems. Is there any likelihood that the programs that you looked at will be dealt with in a more businesslike fashion, perhaps more than these other social problems?

MR. KLEIN: The housing programs have, behind aspects of them, some of the strongest interest groups out there—the mortgage bankers, the realtors, and the home builders. Those are three very powerful interest groups, particularly the mortgage bankers, but all three of them have a lot of power up on the Hill. They have interests that conflict with each other and that sometimes conflict with the FHA's goals, so there's always an interesting interplay going on there.

The fact is that credit reform was useful and helpful. Some people were uncomfortable with it because they were afraid that, when the light got shone, some programs were going to be in a lot of trouble. Credit reform has required the federal government to be much more responsible about these programs than it had ever been before. As a result, it's pushed departments to improve their loan monitoring and administration. It's pushed them to collect data, which has made them better managers.

Some of these programs with 75–80% default rates are not going to get shut down because they're veterans' programs and they're Bureau of Indian Affairs programs. I'm just picking out the top two in default rates. If you go down the list, some of the other high ones are in agricultural. The political strength of the lobbies that are in support of these programs is strong.

Are these programs going to grow in the current environment? No. Are they going to go away? Probably most of them will not. The fact that for five years they've been reporting their default rates at 75% and they're still there indicates they have some powerful political support, and they're not likely to go away anytime soon. If the Republicans are actually going to go forth with balancing the budget, at some point they're going to have to look at these agriculture programs and say, "You know, we can do that, or we can have a military."

MR. PANJER: You mentioned actuarial review of housing programs. I thought it was multifamily housing.

PUBLIC GUARANTEE PROGRAMS

MR. KLEIN: It was actually both single family and multifamily.

MR. PANJER: Are there actuarial reviews of any of the other programs either required or done that you're aware of?

MR. KLEIN: I am not aware of a requirement on any group, other than the FHA and the Veterans Administration that it have an actuarial review. Maryland has a requirement that it have an actuarial review of its housing insurance funds every three or four years, and I believe Vermont also has that requirement.

MR. KILBOURNE: California, I think, does.

MR. KLEIN: California does for veterans' housing, so there are some requirements out there. Even when there isn't a requirement, the fact of credit reform and the reporting requirements under credit reform have pushed some agencies to at least have somebody come in and do some analyses. Having an actuary on that team is usually essential.

