

**MORTGAGE DEFAULT INSURANCE
IN THE U.S.: IMPLICATIONS FOR
RUSSIA**

Prepared for

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ABSTRACT

The objective of this paper is to introduce the concept of mortgage default insurance as developed in the United States into the context of Russian mortgage lending. The first part of the paper discusses the broad principles and operations of mortgage default insurance offered by private companies as it works in the United States. The pricing of this product and the preconditions for offering such insurance are highlighted. The second section outlines the operation of the U.S. government-supported default insurance offered by the Federal Housing Administration (FHA). The final part applies the foregoing information to the situation in Russia today and concludes that the conditions necessary for launching mortgage default insurance do not currently exist in the country. Nevertheless, there are a number of essential actions that can and should be taken over the next several months to put Russia on the road to establishing such insurance in a few years. The paper finishes with a possible action plan for the next two years.

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MORTGAGE DEFAULT INSURANCE IN THE U.S.: IMPLICATIONS FOR RUSSIA¹

Mortgage guaranty insurance, sometimes called default insurance, protects against lender or investor loss by reason of borrower default (credit failure) accompanied by insufficient recoverable value in the property securing the insured loan. There are several aspects of mortgage insurance that distinguish it from other forms of casualty insurance:²

- The critical risk for mortgage default insurance is “catastrophic.” In other words, mortgage default risk is not limited to the normal risk that an individual homeowners household might experience in terms of financial adversity, resulting in foreclosure. Rather, a “catastrophic” risk refers to the widespread foreclosures that may occur as a result of economic depression at the regional or national level. To mitigate this risk, it is desirable for mortgage default insurance to be issued over diverse regions of a country and for a large number of loans to be insured. This concept is referred to as risk dispersion, and it becomes an important factor for regulatory and rating agencies when they evaluate or rate a mortgage insurance company’s claims-paying ability.
- The horizon of risk assumed under each individual mortgage insurance policy is unusually long. Home mortgages are long-term instruments, normally from 25 to 30 years. To serve its intended purpose, therefore, mortgage insurance must be noncancelable by the mortgage insurance company. As a practical matter, the premium price for the life of the loan is determined when the loan is made by the lender, despite the likelihood of changing conditions during the life of a mortgage loan.
- There is an unusual combination of credit and collateral risk. The “event of loss” under a mortgage insurance policy is the borrower’s failure to make required periodic payments. The risk of actual loss also depends on the occurrence of a second event following borrower default, namely, the lender’s inability to recover the full debt owed through disposition of the collateral property.
- Inflation reduces, rather than increases, the risk of mortgage insurer loss, because it increases the value of the property and therefore the spread between the property value that would be realized at auction in the event of foreclosure and the loan amount.³
- Establishing long-term catastrophic loss reserves is necessary to address the unique risks associated with the contingent probability of future economic depression. Consequently, mortgage default insurance has greater capital requirements than other insurance lines. The catastrophic loss reserve for private mortgage insurers in the United States is called the Contingency Reserve. The Contingency Reserve is governed by some specific state regulatory requirements that mandate the amount of earned premium contributions as well the conditions under which the mortgage insurer may withdraw funds from the Contingency Reserve.

1 The author thanks Brien Desilets and Michael Stevens for help in gathering and distilling materials used in this report.

2 Taken from Roger Blood, “Mortgage Insurance for India,” *Housing Finance International*, 1999.

3 The tacit assumption here is that the mortgage is not negative amortizing, as under a dual rate mortgage for example.

Because of the potential size of the loss from claims by a single loan originator and the points just listed, key policy provisions include the following:

- The loan originator and servicer must be qualified by the insurer.
- The policy is noncancelable by the insurer for the life of the loan.
- The claim for loss includes the unpaid principal, interest due and unpaid, legal costs (up to a specified limit), delinquent taxes, delinquent property insurance premiums, required property maintenance, and any other foreclosure-related costs that are approved by the mortgage insurer.
- Following default and prior to the loan becoming more than a specified number of payments (six for private mortgage insurance), in default, the property must be foreclosed and clear title rendered to the insurer to perfect the claim.

Banks require that borrowers who desire a loan where the loan-to-value ratio is greater than 80 percent purchase mortgage default insurance with the bank as the beneficiary. The borrower bears the cost of the insurance premium either as an addition to the monthly payment or by the bank charging a higher interest rate for the loan to cover the cost of the mortgage insurance.

This paper describes the structure of mortgage insurance in the United States from the perspective of the potential usefulness of such insurance in the Russian Federation. The first part provides a general discussion covering key aspects of such insurance. In this part, it is assumed that the issuer of the mortgage insurance is a private entity. The second part of the paper describes one default insurance product of the Federal Housing Administration, a U.S. government agency that issues default insurance policies to banks for certain classes of borrowers and homes being purchased. The program is the Federal Housing Administration's primary program for insuring mortgage loans given for the purchase of individual housing units for owner occupancy. The final section outlines an idea for how to proceed with the development of such insurance in the Russian Federation.

A. GENERAL DISCUSSION⁴

1. POTENTIAL IMPACTS OF THE AVAILABILITY OF MORTGAGE INSURANCE

In the United States, mortgage default insurance contributes to borrowers' ability to afford home purchases. Mortgage insurance (MI) operates, first and foremost, through reducing the amount of equity (cash down payment) necessary in a typical loan situation. In other words, it permits a higher loan-to-value ratio for the loan. Second, it may be used to allow an increase above the typical/normal ceiling for (net) payment burden (the proportion of income that must be utilized to pay the mortgage.)

In Russia, the primary role of mortgage default insurance may be to lower interest rates. Today, Russian commercial banks charge several hundred basis points to cover themselves against the credit risk associated with home purchase mortgage lending. The perceived credit is high because of several factors:

- the weakness of certain aspects of the Law on Mortgage, although the amendments to the law enacted in 2002 sharply reduce these;
- the lack of experience with home purchase mortgage lending on which banks could base informed estimates of risk;
- the absence of a strong record of court decisions in favor of banks in cases involving a claim against borrowers in default; and
- the fact that attitudes of borrowers toward assuming debt for housing and the repayment of their mortgage debt have not evolved to the extent that banks or borrowers are comfortable with at this point in time.

In the United States and other countries that have extensive experience with mortgage lending, banks are able to price credit risk quite accurately. In Russia, however, banks charge high rates to compensate for the lack of information. The lack of loan-level mortgage performance data is the biggest impediment to interesting insurers in offering mortgage insurance.

2. INSURANCE AND BANKING REGULATORY CONSIDERATIONS

Insurance. Key features of current regulations in the United States that are especially applicable to mortgage default insurers generally include the following in some form:

■ **"Monoline" restriction.** Under this restriction, mortgage insurers must be chartered to conduct this particular line of business separately from all other lines. Alternatively, strict segregation of mortgage insurance

⁴ This part draws extensively on the paper by R. Blood, "Prospective Role of Mortgage Insurance in Support of Housing Finance in Poland." Report to USAID. Washington, D.C.: The Urban Institute, 1998.

capital reserves from reserves for other lines of business is required. Such segregation would also apply to reinsurers of catastrophic risks that are inherent to the mortgage insurance product.

One of the unique requirements for private mortgage insurers is the establishment of the Contingency Reserve. The Contingency Reserve is mandated by statutory regulation and requires private mortgage insurers to place one half (subject to a minimum of .125 percent) of their earned premiums in the Contingency Reserve for a 10-year period. There are specified conditions under which a mortgage insurer may withdraw funds from the Contingency Reserve prior to the expiration of the 10-year holding period. Generally, the exception is allowed when the mortgage insurer's losses exceed a stated loss ratio for a consecutive number of calendar quarters. The Model Act for default insurance (described later) recommends that a loss ratio in excess of 35 percent for at least six consecutive quarters be the requirement. Funds are withdrawn only for the amount that exceeds the 35 percent mortgage insurer loss ratio. If the funds are not withdrawn from the Contingency Reserve prior to the 10-year holding period, they are released on a first-in first-out basis.⁵

■ **Minimum capital related to total risk outstanding.** The mortgage insurer's total capital is referred to as policy holders surplus and consists of invested capital, retained earnings, and reserves. Each mortgage insurer's total capital and reserves must increase proportionately with the total amount of contingent risk underwritten and outstanding.

Contingent (i.e., statutory) risk in force for mortgage insurers is a function of the total insured loan amount outstanding (or a percentage thereof, depending on actual policy terms and conditions). Mortgage insurers' risk-based capital requirements may also vary with loan-to-value ratios, with a higher percentage of capital required to support financial risks associated with higher loan-to-value credits. Such risk-based capital requirements resemble those of a modern bank more than those of a traditional insurance company, in that mortgage insurer reserves do not relate by formula to premiums written or claims experience, but rather to the equivalent of minimum bank equity relative to total outstanding credits. The actual method for establishing minimum risk-based capital for mortgage insurers varies from country to country, but the principle is consistent to the extent that this method for establishing minimum regulatory reserves differs from that of other standard insurance lines.⁶

⁵ Due to the cash flow burden of placing 50 percent of their earned premiums in the Contingency Reserve, mortgage insurers have been given a special method of federal tax payment, called tax loss bonds, for the earned premiums that are deposited in the Contingency Reserve. Essentially, the mortgage insurer purchases federal tax loss bonds in the amount equal to the federal tax obligation that would have resulted had no contribution been made to the Contingency Reserve. The tax loss bonds are carried as an asset, non-income generating, on the mortgage insurer's balance sheet for the 10-year period. If the funds are needed to pay claims, the mortgage insurer redeems their value through tax reductions and a restatement of prior years' earnings. If the tax loss bonds are not redeemed, then they mature (in essence expire) at the end of the ten-year period with no value.

⁶ In some states in the United States, there is a double formula for determining capital requirements. In Part 1, the required capital is based on the total risk exposure of the insurer. Risk exposure is the percentage of the value of the loan that is insured. The capital requirement, expressed as a percentage of the exposure, is lower the higher the risk exposure (i.e., the higher the value of the loan that is covered). So, if risk exposure is 20 percent of the loan amount (i.e., the top 20 percent of the loss), the capital requirement is 4 percent of the exposure; if risk exposure is 100 percent of the loan amount, the capital requirement is 1 percent. The reason for the declining requirement is that few defaulted loans ever have losses so large in relation to the loan amount.

Part 2 of the formula adjusts the capital requirement computed for a loan in Part 1 for the loan's

■ **Conflict-of interest-restrictions.** Mortgage insurers are not permitted to be owned or controlled by banks or other institutional mortgage lenders, or, if so owned or controlled, are restricted in terms of their ability to guarantee the repayment of loans originated by parent or affiliated lending institutions.

In addition, regulatory provisions commonly prohibit rebates, commissions, or other financial inducements offered by a mortgage insurer as a means of persuading a mortgage lender to place its insured loan business with that insurer. For example, while lenders may, in some regulatory environments, act as commissioned insurance agents for the placement of personal lines of life and casualty insurance purchased by their borrowers (e.g., homeowners fire and liability), such a relationship is widely viewed as a conflict of interest in the instance of mortgage default insurance.

Whereas independent underwriting is not a concern for these other personal risks (because the bank does not directly control such risks on the part of its customers), such underwriting independence by mortgage insurers is critical to their long-term viability because the profile of mortgage default risks is largely determined by the originating lender/mortgage insurance policyholder.

Other secondary items that may be found in mortgage default insurance regulations include (1) maximum permissible loan-to-value ratios; (2) a requirement that eligible insured lenders be regulated or supervised institutions; and (3) a requirement that the construction of properties eligible to secure insured mortgages be completed prior to submitting a claim for loss.

In the United States, the National Association of Insurance Commissioners (NAIC) has promulgated a special Model Act governing the business of mortgage default insurance. Many states have adopted this Model Act, which includes provisions covering the above-referenced considerations applicable to mortgage default insurance. (A copy of the Model Act prepared by the National Association of Insurance Commissioners is being provided separately.)

Banking. Mortgage default insurance is especially susceptible to the dangers of “adverse selection of risk” by the lenders who purchase it--so much so that, in the absence of some broad or blanket standard defining when mortgage insurance is to be used, a mortgage insurance program is unlikely to be viable under circumstances where lenders choose, case by case, which loans to insure and which loans to “self-insure.”

There are two basic ways to establish a system whereby adverse risk selection against mortgage default insurers may be avoided. The first way is through direct banking regulation (e.g., All loans made by regulated lenders and/or sold to regulated investors must carry mortgage default insurance whenever the loan-to-value ratio exceeds xx percent.) The U.S. standard is 80 percent loan-to-value (LTV) ratio for secondary market agencies. The second way is via properly designed financial incentives for banks and other regulated lenders (e.g., Risk-based regulatory capital requirements will be reduced from 100 percent to 50 percent (or a lower requirement) for all home mortgage loans exceeding xx percent loan-to-value ratio if such loans carry qualified mortgage insurance.”) The U.S. standard is 80 percent for banks and thrifts insured by an agency of the federal government. The 80 percent U.S. standard appears to be higher than the expected limit for Russia.

LTV. For LTVs higher than 80 percent, the value is as computed in Part 1. For LTVs between 50 and 80 percent, the value computed in Part 1 is reduced by half. For LTVs of 50 percent and under, the value computed in Part 1 is reduced by three-quarters.

There are probably more examples of regulatory mandates than risk-based incentives for the use of mortgage insurance. U.S. federal housing legislation, for example, mandates the use of mortgage insurance for home loans exceeding 80 percent loan-to-value ratio whenever such loans are sold in the secondary market through the federally sponsored conduits, Fannie Mae and Freddie Mac. Canadian home loans exceeding 75 percent are routinely required to carry government or private mortgage insurance.

Today, however, a financial incentive rather than a regulatory mandate probably would be the preferable means of positioning mortgage default insurance within a nation's developing housing finance sector—that is, assuming mortgage insurance has been determined to be a useful component of the nation's housing finance system.

International risk-based capital standards for financial institutions, applicable under the Basel Accords, recognize the inherently lower risks associated with residential mortgage loans. Individual nations are permitted, but not required, to assign risk weightings for home loans as low as 50 percent of the full 80 percent capital standard. National central bank discretion is permitted whereby some classes of mortgage loans may be assigned the more favorable capital standard, while other, higher risk, loans may be required to carry a 100 percent risk weighting.

In the United States, for example, home loans with loan-to-value ratios of 80 percent or less generally are granted a 50 percent risk-weighted capital requirement. Loans exceeding 80 percent LTV ratio are burdened with a 100 percent capital requirement because of their demonstrably greater credit risk. However, an exception is granted for loans over 80 percent LTV that carry mortgage default insurance from a qualified insurance provider, in which instance the lender making such a “high-ratio” insured loan benefits from a reduced 50 percent capital standard. (Note that construction-related mortgages and mortgage loans secured by income-producing commercial properties are subject to the 100 percent capital standard.)

The risk-based capital requirement rules must be adopted by each individual country in line with its own risk. For example, a similar utilization of mortgage default insurance is currently under consideration by the central bank authorities in Israel. However, Israel's housing market and mortgage finance system are less stable than those of the United States, and therefore Israel is considering a loan-to-value standard of 60 percent. It considers this standard, rather than 80 percent, as the triggering point for requiring 100 percent, rather than 50 percent, capital support, and correspondingly for giving equivalent capital relief for the use of qualified mortgage default insurance on loans exceeding the 60 percent LTV benchmark.

3. MORTGAGE INSURANCE COSTS AND PRICING

Standard practice among private insurance companies is to base the premiums for mortgage default insurance on the past experience of insurers providing such policies. In most countries, private insurers base their initial rates on the experience of pioneering public sector insurance companies. Such experience is obviously lacking in Russia. But so, too, is experience by banks with mortgage lending over a minimum of five to ten years.

In thinking about pricing mortgage insurance, it is important to keep the following in mind: MI will not reduce the risk or the true cost of that risk with respect to individual loans, holding other conditions being constant. In fact, by possibly encouraging higher loan-to-value ratios, MI is more likely to increase the risk of default. However, other conditions are not constant: By spreading the risk across markets and lenders through

the “law of large numbers” and by imposing a consistent third party underwriting review standard on all loans insured, a well-structured mortgage insurance program can, and should, reduce the risk premium that is actually charged for the credit risk that is shifted from the lender to the mortgage insurer.

How much might such a mortgage insurance premium be for Russian homebuyers? Clearly it should be higher than currently prevailing rates in the United States (3 to 4 percent of the original loan amount), or in Canada (2 to 3 percent of the original loan amount). Among the reasons for the higher insurance premium costs in Russia are the following:

- lack of information on transactions—lack of risk experience data, as noted, and lack of readily accessible, reliable underwriting data on individual applications; lack of credit history for borrowers; lack of good local housing and related market data; and an uncertain resale market for foreclosed properties;
- legal and administrative issues—greater uncertainty as to lien priority; higher and more uncertain costs of foreclosure; judicial precedence; property recovery; and a possible need to assume additional risks (e.g., occupancy rights with respect to obtaining clear title) that are not widespread in United States, Canada, or elsewhere; and
- loan processing and loan demand issues—probable higher underwriting costs, lower volumes, and lower average loan amounts to insure; incremental risks attributable to high and uncertain inflation rates in combination with a potentially volatile mortgage instruments; and lack of standardized practices and documentation among lenders.

Against these, however, is the fact that in Russia typical loan-to-value ratios will be much lower than those in developed countries, and there is a direct relationship between lower LTVs and lower default rates.

The premium rate for mortgage default insurance in any national market consists of the same four universal components as all other lines of insurance: (1) claims costs, (2) capital costs, (3) overhead costs, and (4) profits.

Primary factors determining the cost/price of mortgage default insurance in particular include the following:

- **Claims incidence or frequency rate.** Typically defined as the percentage of insured loans underwritten in any given year that ultimately default *and* result in a paid insurance claim. This variable is based on a loan count. A more exact method is to further isolate the loans for each book year by specific criteria known to affect default rates, such as LTV ratio, financing instrument (type of mortgage, e.g., fixed or variable rate), or occupancy of the property (e.g., owner-occupied or investment property).
- **Loss severity rate.** Typically defined as the average percentage loss with respect to all loans underwritten in any given year that result in a paid insurance claim. Key items that affect severity are legal impediments to rapid foreclosure, the amount of mortgage insurance coverage for the loan, and the salvage value for distressed property sales.

- **Persistency.** Persistency is the number of the book year's policies that remain in force at the end of each time period. Refinancing, loan payoffs, and defaults reduce the persistency rate.
- **Cost of capital.** Proper capital requirements for mortgage default insurance far exceed those of most personal and commercial lines. Capital costs, accordingly, play a much greater role in determining the costs and required premium rates for MI. Additionally, because of regulatory requirements, the types of investments that qualify as mortgage insurers' assets are limited to those that are safe and secure, hence resulting in lower yields.
- **Underwriting expenses.** Included here are the entire mortgage insurer operating costs except those directly related to the administration of claims and losses.

Specific cost variables, each relating to one of the above five areas, which can enter into the pricing of mortgage default insurance offerings include the following:

- the projected rate of return on investment portfolios;
- the required rate of return on owners' equity;
- corporate taxes (federal government taxes in the United States);
- premium taxes (imposed by some states in the United States);
- terms of coverage, including risk-sharing provisions with insured lender (e.g., risk deductibles);
- the projected average loan/mortgage insurance policy's life;
- specific formulas for determining capital requirements relative to outstanding risk exposure; and
- the projected timing of all revenue and expense items over a policy's life, especially timing of claims.

Returning, then, to the overarching considerations of probable claims frequency and loss severity, the cost structure for mortgage default insurance would rest upon those risk variables that contribute significantly to (1) the probability that loans having certain common risk-related characteristics will eventually default without "curing", that is, being reinstated as current and (2) once the default becomes incurable, the likely extent or severity of the eventual loss to the insurer.

Given the above observations about mortgage default insurance pricing, clearly it is not possible to project even a narrow range of probable premium charges at which mortgage insurance might be offered to mortgage lenders and borrowers in Russia. Short of that, however, the two examples shown in Exhibits 1 and 2, based on a simple mortgage insurance pricing model prepared by Doug Whiteley, are offered to illustrate how, under significantly disparate risk circumstances, a single payment mortgage insurance premium for ten years' coverage might vary from as low as 1.55 percent of the initial loan amount to as high as 15.3 percent. Holding all other variables constant, the two dominant pricing variables of claims frequency and loss severity

rates are projected from a low of 5 percent frequency and 25 percent coverage severity to a high of 20 percent frequency and 50 percent coverage severity.

Under the more favorable scenario (Exhibit 1), for example, 1 of every 20 loans insured in, say, the year 2002 eventually results in a claim. Then, assuming that the average original insured loan amount was U.S.\$50,000, the average claim for loss would be 29 percent of the original loan amount before the sale of the property. (Exhibit 3 illustrates the computation of the claim, the insurer's payment to the bank, and the insurer's net loss.)

Under the less favorable scenario (Exhibit 2), one of every five loans insured during that same origination year eventually results in a claim. Assuming the same U.S.\$50,000 average insured loan amount, the average loss per claim would then be 62.5 percent of the original loan amount before the sale of the property securing the loan.

Which, if either, of these divergent sets of simplified loss assumptions would be more likely to occur were mortgage default insurance to be offered in Russia as early as the year 2003? The critical factor of claims frequency is extremely difficult to project without experience. Even with documented experience, a great deal depends upon future economic variables such as income, employment, inflation, and home prices. Also, as noted above, claims frequency—even in a stable economic environment—will vary considerably depending upon both the characteristics of the loans insured and the quality of the insured lender's loan underwriting and subsequent collections performance.

In more developed mortgage markets, total foreclosure costs typically would amount to less than the 25 percent loss severity rate projected under the more favorable of the two scenarios. Loss severities in more advanced mortgage markets, accordingly, tend to be driven to a greater extent by changes in home values following the origination of a loan and the placement of the mortgage insurance.

In present-day Russia, with its lack of information on default experience, premiums would have to be close to those shown in Exhibit 2, unless there were some marked changes in the existing lending market.

As to the question of who would ultimately pay for the cost of mortgage insurance, the answer is that one way or another the borrower/homeowner will pay this cost. The mortgage lender would purchase the insurance coverage and become the policyholder and direct beneficiary. The premium charge, however, inevitably will be passed through to the borrower through the bank charging a higher interest rate on its loan. The benefit to borrowers is that, with mortgage insurance, they will have access to home purchase or home improvement financing that would not otherwise be available, or at least would not be available as soon.

The matter of how a given mortgage insurance premium may be passed through to the borrower would be relevant to affordability and, consequently, to potential market acceptance. Mortgage insurance may be charged *by the insurer to the lender* in the form of a single lump sum payment at the outset, or periodically over the life of the coverage. For a developing market, the lump sum alternative probably is preferable, mainly for administrative efficiency. Additionally, in the event of default, the premium would become fully earned.

Mortgage insurance may be charged, in turn, *by the lender to the borrower* either (1) as a direct pass-through, (2) in the form of a higher interest rate, (3) as a lump sum due at the closing, or (4) as a lump sum addition to the total mortgage loan amount, effectively financing the entire premium charge. Of these

alternatives, the one that effectively finances the premium for the borrower over the loan life is preferable (in terms of affordability).

If mortgage default insurance were offered in Russia in the next couple of years, loss parameters like those in Exhibit 2 might well be used in the absence of other data. The additional charge of 15 percent of the insured loan amount would make home purchases with mortgage insurance much harder for most households; assembling the additional funds at the time of closing would be very difficult.⁷ So banks would probably add the 15 percent premium to the loan principal, which would have a more modest impact on the ability of families to afford purchases. For example, the monthly payment on a U.S.\$50,000 loan with a 15-year term and 12 percent interest rate would be U.S.\$600.08. If the 15 percent up-front insurance premium for 50 percent loss coverage were added to the principal, the new monthly payment would be U.S.\$690.09.

⁷ Indeed, it might well be the case that the risk to the bank would be lower if the borrower added the 15 percent to his equity in the unit rather than forcing the borrower to use his funds to purchase the insurance.

Explanation of Terms Used in Exhibits 1 and 2

Coverage: The top-down (or top tier) percentage of the loan that is covered by insurance. For example, with 40 percent coverage, the insurer would be liable for the first \$40,000 of losses on a \$100,000 loan. Several terms are used to describe the mortgage insurance coverage:

Top tier—refers to the top part of the loan that, in the event of default, would be the most likely to be a loss. Top tier means that the mortgage insurer intends to take the first dollar losses up to the coverage amount.

Optional Guaranty (OG)—refers to the percentage of mortgage insurance coverage on the insured loan, for example, OG 25 denotes 25 percent coverage.

Cumulative claim rate: Over the life of an insured loan portfolio or book of insured mortgage loans, the total number of claims as a percentage of the total number of loans originally insured in the portfolio or book.

Loss severity: The average amount of monetary losses on all claims in a portfolio or book of loans as a percentage of the total policy face amount of those loans insured that become claims.

Underwriting expenses: The average cost to the insurer for issuing and subsequently administering an individual policy of insurance on a single loan, exclusive of costs associated with the administration of insured loans, which default and become claims.

Contingency reserve rate: An amount equal to 50 percent of a mortgage insurer's earned premium, which is required to be maintained as a catastrophic loss reserve for a period of 10 years. Refer to page 6 of this paper for a more detailed explanation.

Policy holders surplus: The sum of the individual mortgage insurer's capital, reserves, and retained earnings. This sum represents the amount of assets available to pay all claims made to the mortgage insurer.

Annual run-off or prepayment rate: The percentage of a portfolio or book of insured loans outstanding that experience a termination of insurance coverage for reasons other than a claim for loss by the insured lender. The two main reasons for nonclaim termination are the payoff of the underlying loan, including when the subject dwelling is resold or refinanced, and the discretionary termination of insurance coverage, if permitted, by the insured lender/investor.

Investment rate of return: average effective interest rate on the insurance company's investments, including reserves.

Basis points (BPTs): One basis point is equal to 1/100 of 1 percent. One percent is the equivalent of 100 basis points.

Book year: A group of loans that were originated in the same time period (normally a year) that have similar risk characteristics.

Loan-to-value ratio (LTV): The loan amount divided by the lesser of the appraised value of the property or the sales price (except for refinances) expressed as a percentage.

Mortgage payment: The sum of the monthly principal and interest, property taxes, property (hazard) insurance, and any common area maintenance fees.

Mortgage payment ratio: The mortgage payment divided by the borrower's gross monthly income.

Debt ratio: The sum of the mortgage payment and all other monthly payments owed by a borrower that have more than ten payments remaining divided by the borrower's gross monthly income.

EXHIBIT 1

Pricing for a Book of Loans with Positive Performance Assumptions

Mortgage Default Insurance Pricing Assumptions
Illustrative Example

Average loan amount (U.S.\$)	50,000
Number of loans	10,000
Total policy face amount insured (loan amount)	500,000,000
Coverage (top tier percentage)	25%
Cumulative claim rate (during 10-year period)	5%
Loss severity note: claim for loss is 115% of the original loan amount	29%
Investment rate of return (assets invested)	6.25%
Underwriting expenses (estimated at 30% of earned premium)	30%
Income tax (federal corporate tax rate)	35%
Premium tax (state tax rate estimated average)	2%
Contingency reserve rate (50% of earned premium)	.2125%
Discount rate (borrowing rate for bank funds)	8.0%
Mortgage loan interest rate	10.0%
Annual runoff "prepayment" rate	7.0%
Indicated mortgage insurance premium rates based on the above assumptions are:	
Annual premium rate (basis points)	42.5 BPTs .425%
Single premium rate 10-year coverage (basis points)	155 BPTs 1.55%

EXHIBIT 2

Pricing for a Book of Loans with Negative Performance Assumptions

Negative Mortgage Default Insurance Pricing Assumptions
Illustrative Example

Average loan amount (U.S.\$)		50,000
Number of loans		100,000
Total policy face amount insured (loan amount)		500,000,000
Coverage (top tier percentage)	Negative	50%
Cumulative claim rate (over a 10-year period)	Negative	20%
Loss severity note: claim for loss is 125% of the original loan amount	Negative	62.5%
Investment rate of return (assets invested)		6.25%
Underwriting expenses		30%
Estimated at 30% of earned premium		
Income tax rate (federal corporate tax rate)		35%
Premium tax (state premium taxes estimated average)		2%
Contingency reserve rate (50% of earned premium)		2.25%
Discount rate (borrowing rate for bank funds)	Negative	12.0%
Mortgage loan interest rate	Negative	15.0%
Annual runoff "prepayment" rate	Negative	12.0%
Indicated mortgage insurance premium rates based on the above assumptions are:		550 BPTs
Annual premium rate (basis points)		5.5%
Single premium rate		1530 BPTs
10-years Coverage (basis points)		15.3%

EXHIBIT 3
Mortgage Insurance Claim for Loss Example
Illustrative Example

Claim For Loss—Submitted to the Mortgage Insurer Immediately After Completion of Foreclosure
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Claim for Loss Components:

Unpaid principal balance (U.S.\$)	50,000
Delinquent interest from the point of default	5,000
Property taxes due or paid by the servicer	1,000
Property insurance premiums due or paid by the servicer	200
Property maintenance, normal and customary costs	500
Legal expenses to foreclose and obtain clear and merchantable title to the property	1,500
Claim for loss amount —submitted to the mortgage insurer	58,200
Mortgage insurance coverage on the defaulted loan assume the coverage was 25%	25%
Claim amount payable by the mortgage insurer to the bank 25% of the claim for loss amount	14,550
Bank exposure on the property Claim for loss less mortgage insurance claim payment	43,650
Proceeds from the sale of the property Distressed sale nets 80% of the original loan amount	40,000
Gain/(loss) to bank after sale of property	(3,650)

B. U.S. FEDERAL HOUSING ADMINISTRATION (FHA) INSURANCE

Administratively, FHA is within the U.S. Department [Ministry] of Housing and Urban Development. FHA's main program for insuring home purchase mortgages is the so-called Section 203(b) program, named for the corresponding section of the national housing law. From its inception, after the massive defaults in the Great Depression, the program was designed to promote homeownership by mitigating credit risks to lenders. Today, the insurance is designed to increase LTVs for creditworthy borrowers.

A quick introduction to this program is available from the data in Exhibit 4; the exhibit also provides parallel data for private mortgage insurance in the United States. There are several important distinctions between the two types of mortgage default insurance policies. While private mortgage insurance (PMI) covers the top 20 to 30 percent of the claim amount, FHA provides full coverage of the allowed claims. On balance, FHA costs more than PMI, a reflection of the differences in segments of the market served; note that the substantial initial payment is normally added to the loan principal and in effect paid by the borrower over the term of the loan.

EXHIBIT 4
Comparison of Private and FHA Mortgage Default Insurance⁸

Feature	Private mortgage insurance	FHA
Type	Insurance ⁹	Insurance
Coverage	Typically 12 to 30% of loan amount ¹⁰	100% of loan amount
Loan size	Typically \$500,000 (Maximum)	\$121,296 in low-cost areas (maximum) \$219,849 in high-cost areas (maximum)
Loan term	Up to 40 years (normally 30 years)	15 and 30 years
Loan type	Fixed and adjustable rate	Fixed and adjustable rate
Premium plan	Monthly, annual, and single premium plans	One-time initial premium plus monthly premium
Price (% of loan amount)	0.32 to 0.90% annually, depending on LTV and other loan characteristics	1.75 to 2.25% one-time premium plus 0.50% annually
Share of total insure market (1999) ¹¹	52%	34%
Share of total mortgage market (1999)	15%	10%

The following section outlines the main elements of operation of the program. It begins with the principal requirements for a lender to be certified to have the loans it originates insured by FHA and concludes with notes on the foreclosure and claims process.¹²

8 Source: David Liu, "Exporting Mortgage Insurance Beyond the United States," *Housing Finance International* (32–41). 1999.

9 In addition to insurance, investor protection may take the form of a guaranty, as under mortgage-backed bonds guaranteed by the Government National Mortgage Association (GNMA).

10 Typically the policy guarantees payment to the lender of the top 20 to 30 percent of the *claim* amount.

11 The balance is accounted for by insurance from the Veterans Administration.

12 Documents consulted in preparing the following are U.S. Department of Housing and Urban Development, *Mortgagee Approval Handbook*, Handbook 40601. REV-1, 1993, and *Administration of Insured Homes*, Handbook 4330.01 REV-5, 1994.

1. Requirements for lender certification

- The lending agency (mortgagee) must certify a net worth of at least \$250,000, plus 1 percent of the total volume of insured mortgages the mortgagee administered in the previous fiscal year in excess of \$25 million; maximum requirement = \$1,000,000.
- Mortgagees must have liquid assets of at least 20 percent of their net worth.
- Mortgagees are most frequently one of the following: mortgage company, savings and loan (S&L) association, commercial bank, mutual savings bank, state housing finance agency, or credit union.
- The mortgagee must provide proof of insurance for both fidelity bonds and errors and omissions.¹³
- Before approving an agency, FHA reviews the applicant lender's credit reports, audited financial statements, state licenses, senior corporate officers' qualifications, quality control plan, and the quality of the mortgagee's facilities.
- FHA reviews the applicant's ability and resources to insure that the applicant has adequate facilities and capability to service FHA loans.

2. Monitoring and loss of certification

- FHA reviews the number of defaults and claims every three months in a given geographic area and computes a regional average for mortgagees.
- FHA monitors a given mortgagee's defaults and claims rate for at least a year before taking any action.
- If a given mortgagee's rate of default and claims exceeds 200 percent of the regional average, the certification is revoked in 60 days. (FHA may give dispensation if the mortgagee is providing loans to an underserved area that lacks a history of mortgage lending.)
- FHA may request the mortgagee's latest financial statement and other records pertaining to lending activities at any time
- The mortgagee's quality control plan must account for full and accurate reporting in each loan application: ensuring that the interview was completed for first-time homebuyers, determining whether all credit reports were gathered with due diligence, determining whether the applicant has other FHA-insured mortgages, verifying the applicant's income, and identifying any possible indications of fraud.

¹³ Mortgagee's errors and omissions coverage is a specialized form of professional liability insurance that protects mortgage lenders and their secondary investors against certain liabilities and losses resulting from an error or accidental omission in the performance of certain normal operations. Fidelity insurance is a form of surety that protects mortgage lenders against losses arising from the dishonest, fraudulent, and criminal acts of its management and employees.

3. Insuring loans

- Once a lender becomes certified by FHA, that lender becomes the decisionmaking body for loan approval.
- The vast majority (99.9 percent) of Section 203(b) insured loans are approved through the "direct endorsement" process which bypasses the need to first consult with FHA before issuing insured loans.
- Mortgagees attempting to achieve direct endorsement certification must have at least five years of experience originating single-family loans in addition to the requirements above. For mortgagees without direct endorsement, usually a larger bank "sponsors" the loan, so again FHA does not directly approve loans for insurance.
- For first-time homebuyers who finance more than 90 percent of the purchase price, a face-to-face interview is required with mortgagee staff.
- Anyone may apply to an FHA-approved mortgagee for an insured loan. The applicant must be creditworthy and be able to meet the cash investment and mortgage payment requirements, but those are both lower than for some uninsured loans, as the point of the program is to make low- and middle-income people eligible to buy homes.

4. Premium structure

- The basic premium structure is shown in Exhibit 4.
- Premiums do not vary with the lender.
- The program is intended to operate on a financially sound basis, although there have been periods when premium income has not been sufficient to cover losses. In these cases, the shortfall has been financed by federal budget appropriations. Premium structures are adjusted from time to time as needed to restore the financial self-sufficiency of the program.

5. Foreclosure and claims processing

- Foreclosure may not begin unless at least three full monthly installments under the mortgage are due but unpaid. Foreclosure must begin once the loan becomes nine payments in default.
- FHA policy is for the lender to work hard to avoid foreclosure, permitting partial payments, and even recasting the loan to lower the average monthly payment on seasoned loans.

- In all cases, the lender is responsible for carrying out the foreclosure for an insured mortgage loan in default and for taking possession of the vacated unit.¹⁴
- There are two points when the lender may file its claim for payment with FHA using the standard form after the loan is foreclosed, the property vacated, and the lender is in possession of a “good marketable title.” The lender is required to file its claim for payment within 30 days after foreclosure has been completed.

Option 1: At the moment the conditions listed in the previous paragraph are satisfied. In this case, FHA takes possession of the title and property and sells the property to mitigate its losses. Current standard procedure is for FHA to contract with real estate companies around the United States that handle this operation.

Option 2: The lender sells the property through an auction process specified in the regulations. (This is the so-called claims without conveyance of title procedure.) The lender’s claim then is reduced by the net proceeds from the sale of the unit. The same form as that under Option 1 is used to file the lender’s claim.

- During the period that the property is under foreclosure, whether vacant or not, it is the responsibility of the lender to ensure that the property is maintained in good condition. Maintenance costs up to \$500.00 may be paid without the prior approval of FHA.
- Costs that can be claimed include cost of protecting and preserving the property; taxes, utility payments, eviction costs; attorney/trustee fees paid; foreclosure, acquisition, conveyance, and related costs; taxes on the deed; mortgage note interest; and mortgage insurance premiums. Other costs can be claimed case of a claim without conveyance of title, but the claim is net the proceeds of the sale.
- It is the policy of FHA to seek deficiency judgements wherever possible for two reasons: to deter future abuse of FHA programs and to reduce FHA losses.

¹⁴ Deeds in lieu of foreclosure are permitted under the regulations.

C. WHAT IS APPROPRIATE FOR RUSSIA NOW?

For several reasons, it is premature for Russia to proceed to establish mortgage default insurance at this time. Nevertheless, there are actions that can be taken now to prepare the way for such insurance. This section first reviews the impediments to offering such insurance now and then explores options for action that could be taken in the short run.

1. Impediments and insurance design issues

Specific *impediments* to mortgage default insurance in Russia today are:

1. Legal issues concerning foreclosure have been largely addressed in the new Law on Mortgage, but it may still take a few years before there is sufficient experience on courts' handling of foreclosure cases for a reasonable degree of comfort to be established for potential insurers. Clarification of the occupancy rights issues by the courts will be needed to facilitate a clean foreclosure process.
2. One of the primary preconditions for mortgage default insurance is widespread standardization in mortgage origination procedures, particularly underwriting and loan servicing. Such standardization is beginning in Russia thanks to the procedures developed by the Agency for Housing Mortgage Lending and Delta Credit. The programs instituted by Delta Credit for the origination and purchase of mortgage loans are a good step toward providing standardization, but there is nevertheless a long distance to general acceptance of these procedures by banks originating loans.
3. There is very little experience with mortgage loans for use in determining the price of mortgage default insurance. Moreover, no program has been set up to develop a data set that will permit analysts to make the relevant calculations in a few years' time. Data on loan originations and subsequent foreclosures will be needed from a range of banks. Traditionally, banks have been reluctant to share such data.

In thinking about *structuring mortgage default insurance for Russia*, one might begin with the FHA program as a model. Two aspects of the program would require modification.

First, the FHA program covers the full loss experienced by the lender (subject to some limits, such as maximum legal charges for certain actions). This is a weak incentive for the lender to underwrite and service loans with great diligence. FHA can penalize lenders by decertifying them. And because most lenders participating in the FHA program have mortgage lending as a major line of activity, the threat of decertification has substantial impact. In Russia, however, where many banks are just initiating home purchase lending, the decertification penalty would be modest indeed. Therefore, a model claims payment policy closer to that used by private mortgage insurers in the United States makes more sense.

In particular, the structure could include:

1. insurance coverage for a fixed percent of the claim, perhaps up to 40 percent; and

2. a stop loss provision limiting insurance claims to a stated share of the loan amount, perhaps 50 percent.

In addition, the option of a lender filing a claim without having sold the property should not be available in Russia; the lender should be responsible for selling the unit. Note that the stop loss provision will encourage banks to move quickly to arrange sales. There may be a need to address the property tax rate that is applicable for property that has been foreclosed upon and owned by the bank but is scheduled for sale.

The second major change to adjust the FHA program for use in Russia is for the government to operate through one or two private insurance firms. Given the level of uncertainty in pricing insurance, the only way mortgage insurance could be initiated in the next few years is with government assistance; specifically, a strong guarantee to insurance companies or state agencies from the government of Russia to pay losses above the expected level (i.e., the level used in determining premiums). In other words, the government would be the ultimate reinsurer in case of catastrophe. There is certainly precedence for such action. Government insurance served as a predecessor to modern private mortgage insurance in the United States, Canada, and Australia.

To be credible to banks in Russia, a substantial reserve fund would have to be set up at the outset. Other essential conditions include the following. First, banking regulations would have to define under which conditions mortgage insurance would be mandatory or specify strong financial incentives for banks to buy this insurance (i.e., lower capital requirements.) Second, insurance would be available only for loans underwritten and serviced according to rigorous guidelines. Third, as a condition of a bank being certified to receive insurance coverage, it would have to agree to provide data on mortgage loans in a standard format.

The development of a government role would be a large task, likely requiring two or more years to complete, and therefore should not be undertaken without careful consultation among banks and insurance companies about the feasibility of such insurance and their interest in it.

The principal advantage of the government providing the reserves against catastrophic losses over setting up its own agency—similar to FHA in the United States or the Canadian Mortgage and Housing Corporation in Canada—is that it avoids the government having to create an operating insurance company from scratch. A much simpler operation, largely limited to oversight responsibilities, would be needed under this model. Given all of the difficulties experienced by the government of Russia in establishing special-purpose agencies in the past, particularly attracting high-quality staff, this is a strong argument for the arrangement. Additionally, it should save a good deal of time. Note that the private insurance company would be liable for losses up to the point of sustained, large losses; this should provide a strong incentive for it to operate effectively.

One or two private insurance companies to which the government guarantee would be extended would be selected on a competitive basis. The selection factors could include the firms' record for prudence in writing other lines of insurance, their record on paying claims promptly, the quality of the staff that would be assigned to the new mortgage default insurance line, and the amount of funds they would allocate to reserves for this insurance.

2. A possible short-term program

While there are excellent reasons for not initiating a mortgage default insurance program at this time, there are, nevertheless, several constructive actions that should be undertaken over the next year or two.

1. Representatives of interested banks, the Central Bank, the Agency for Housing Mortgage Lending, Delta Credit, and Gosstroif of Russia should meet to define standards for mortgage loan origination, including underwriting and loan servicing procedures. These should be given for review to the insurance regulatory agency. When agreed to by all parties, they could be adopted as the “industry standard,” so banks following these would know that the loans they originate that are consistent with this standard would be eligible to be insured under a mortgage default insurance program. Of course, the insurance company would have ultimate determination of its standards, but this standard would have *prima facie* credibility.
2. Under the leadership of the Union of Russian Commercial Banks and the Central Bank, banks originating loans should begin to supply data on loans originated, both on the origination and on subsequent defaults, prepayments, and end-of-term fulfillment. The exact loan-by-loan data to be sent monthly should be determined by experts who can specify the data that would be required to support analysis to determine mortgage default insurance premiums. Funding will be needed for this activity, including maintaining the archive and performing the necessary analysis.¹⁵
3. The creation of a Russian FHA defined along the lines outlined above should be considered. Such considerations should begin with some analysis of the potential impact of the availability of insurance on the interest rates charged by banks on mortgage loans. The implications for loan affordability should be documented. Detailed consultations with banks should be held on their views about the usefulness of such insurance, for example, would they purchase it if it were available at the prices that seem likely to be necessary?
4. Through a consultative process among commercial banks, the Central Bank, and outside experts, a determination should be made of the specific conditions under which mortgage default insurance would be required. This is necessary to avoid banks purchasing insurance only for the most risky loans. As noted, it may be most desirable to reduce risk-based capital requirements for mortgage loans from 100 to 40 percent at most for insured loans rather than to define an LTV or other loan feature as the standard for requiring mandatory mortgage default insurance.
5. Once the information from the prior two points is available, a decision should be taken regarding whether it is wise to seek government support for the creation of an FHA type of facility.
6. With respect to private mortgage insurance, it seems too early to propose the necessary legislation. Until private insurers can price the product, they are unlikely to offer it. While legislation could go forward at any time, it would seem wise to wait until there is genuine interest on the part of at least one insurance company that could participate intensively in the legal drafting process representing the industry’s perspective.

¹⁵ Contracting out of these services appears desirable to ensure consistent attention to the data collection task and the analysis being undertaken by highly competent experts.

The foregoing is in fact a substantial agenda. If it could be accomplished in the next 18 to 24 months, Russia would be poised to proceed with the creation of mortgage default insurance.

Resources

Mutual Mortgage Insurance Fund Annual Audit Report

This is the independent audit results of the FHA 203B program

web site: www.hud.gov/offices/hsg/hsgrrroom.cfm

Private Mortgage Insurance Rates

MGIC is the largest private mortgage insurer in the United States

web site: www.mgic.com (MGIC's premium rates are accessible)