Natasha Mae: First Secondary Facility in the Former Soviet Bloc

by Raymond J. Struyk and Nadezhda B. Kosareva

Housing finance is the area where the needs [for securitization] are the greatest and the performance has been the poorest. In Eastern Europe and the former Soviet Republics, countries striving to make the transition from centrally planned economy to market economy, housing and housing finance was provided by the state. Now it must be provided privately . . . Securitization can be important to meeting the housing needs of emerging nations. (Graffam, 1996: 159)

INTRODUCTION

At the birth of the Russian Federation in 1991, mortgage lending was non-existent. There had been a very limited volume of long-term signature loans for purchase or construction of single-family units in the countryside, but not even these loans were available in middle-size or larger cities. The combination of no legal basis for collateralized lending and the frightening economic instability of 1992-1995 created a distinctly uninviting environment for the development of mortgage lending.[1]

Dr. Struyk is a Senior Fellow at the Urban Institute in Washington, D.C. From 1992 until fall 1998 he was the resident director of the USAID-financed Housing Sector Reform Project in Moscow. During the past two years he has been one of the principal advisers to the Agency for Housing Mortgage Lending. Dr. Kosareva, an economist, is President of the Institute for Urban Economics (Moscow) and a member of the Board of Management of the Agency for Housing Mortgage Lending.

Against this background it is remarkable that Russia is the first country in the former Soviet bloc to create a secondary facility to purchase mortgages: the Agency for Housing Mortgage Lending.[2] This development happened for four fundamental reasons:

1. Sberbank, the former State Savings Bank, stopped making home purchase loans in 1993 after suffering large losses on its outstanding portfolio of very low-interest fixed-rate loans. This opened the way for private banks to enter the market without a strongly advantaged competitor.
2. A minimally adequate legal base was created.
3. After the "easy money" years when banks could make comfortable profits through exchange rate operations and investing in short-term government securities, home mortgages were identified by many banks as having an attractive risk-adjusted rate of return.
4. The government has had a steadfast policy of attracting private finance to the housing sector; the Agency for Housing Mortgage Lending is the most conspicuous example of this policy.

The pressure for the creation of the Agency, however, came from commercial banks. As a group they do not want to make and hold long-term loans. In Russia liquidity is of paramount importance to banks. Even before the recent spate of bank closings associated with the August-September 1998 financial crisis, the risk of failure was high. Between October 1996 and June 1998, 487 commercial banks were closed—almost 25% of the number in operation at the start of the period. Put simply, in response to government promotion of mortgage lending, the banks said they would only increase the volume of such lending if there were a liquidity facility to refinance their loans.

In early 1999 the Agency plans to purchase its first mortgages from two "pilot banks" in St. Petersburg. Purchase volumes will be deliberately low in the following few months while the Agency's various systems are tested and refined. After its first debt issuance, now planned for spring 1999, larger scale operations will begin.

This article first outlines the context in which the Agency prepared to begin its operations, i.e., the situation for mortgage lending in mid-1998. It then describes some key features of the Agency's structure and operations, including its legal basis, the type of loan product it is purchasing, how it intends to obtain funds, and the distribution of risks among participants in the market.

LONG-TERM HOUSING LENDING IN MID-1998

Loan Volume

The Central Bank of Russia does not gather data on mortgage lending. So all estimates of current volumes rely on surveys. The information in Table 1 is for the respondent banks from a June-July 1997 survey of the 200 largest banks in the country. Data are for the first six months of the year. Of the 17 banks reporting information on the number of loans originated, about one-third originated 100 or more loans over the period. Figures from eight active Moscow banks for which we have data on planned lending in 1998 show a 90% increase in lending over 1997 levels.

Based on this information and USAID-sponsored work with over 30 commercial banks on mortgage lending, a rough judgment is that 12,000 to 15,000 loans were originated in 1997, with between one-quarter and one-half of all banks making at least a couple of loans a month. In short, mortgage lending is fairly widespread but loan volumes remain very small for a country the size of Russia and at its stage of economic development.

Credit Risk

Without question Russia's weak mortgage law limited the volume of lending banks were willing to make. Passage of the Law on Mortgage in July 1998 will certainly have a positive effect on loan volume. Before the passage of the new law, most banks used conventional mortgage contracts when making home purchase loans (see Table 1). They protected themselves from risk of non-payment by being very conservative in their loan underwriting and insisting on pledges of other collateral or guarantees from employers or individuals.

Table 1. Data on Housing Mortgage Lending in Russia for Sample Banks (first six months of 1997)

	Bank Name and Location	*Mean Loan Amount in th. Rubles*	*Mortgage Rate in Rubles / in $*	*Term of Loan in Months*	*Type of Contract**	*No. of Loans in 1997 (for a half year period)*
1	"Diamant" (Moscow)	252,361	na / 31.2	12–60	M, L	nr
2	"Investsberbank" (Moscow)	622,389	36 / 26	0–24	M, CR	100
3	MosBusinessBank (Moscow)	170,000	nr / na	0–180	M, CR	nr
4	Ogni Moskvy (Moscow)	1,177,504	60 / 40	12–36	nr	16
5	SBS-Agro (Moscow)	228,956	na / 21	3–120	M, CR, L	300
6	RostraBank (Moscow)	497,053	13 / 15	24–120	M	15
7	Fora-Bank (Moscow)	135,858	45 / 24	3–60	M, CR, CO	70
8	Neftehimbank (Moscow)	198,611	40 / 25	12–60	M, CR, CO, L	nr
9	Ekaterinburg municipal bank	nr	58,5 / na	3–6	CO	4
10	SKB-Bank (Ekaterinburg)	32,172	40 / 15	3–12	M, CR, CO	190
11	Sberbank (Ekaterinburg)	79,475	31 / na	0–120	M, CR, CO, L	150
12	Krasnodarbank (Krasnodar)	nr	nr	nr	nr	100
13	Tatpromstroibank (Kazan)	40,000	10 / na	12–60	M, CR, CO	nr
14	Donkhbank (Rostov- na -Donu)	60,000	30 / na	3–12	M	20
15	Vostsibkombank (Irkutsk)	108,000	45 / na	12–60	M, L	62
16	Bashprombank (Ufa)	35,000	20 / na	24–120	CO	0
17	Tarkhany-bank (Penza)	100,000	20 / na	0–60	CR	nr
18	Kurskprombank (Kursk)	41,000	30 / na	24–120	M	8
19	NBD Bank (Nizhnii Novgorod)	76,317	na / nr	1–18	M, CO	nr
20	Municipal Bank (Novosibirsk)	50,000	60 / na	3–9	M, CR	40
21	NZM Bank	nr	nr	nr	CR	65
22	Center-Invest	77,600	nr / 15	12–32	CR, L	12
23	Zabaikalskii (Chita)	53,619	60 / 40	0–12	M, CR, CO	nr
24	VKA Bank (Volgograd)	47,100	19,8 / na	31–32	M, CR, CO	nr
25	Kuzbassprombank (Kemerovo)	17,000	20 / na	12–60	CR, CO	300

* M = mortgage; CR = collateral against real estate; CO = collateral against other assets; L =lease-purchase agreement; na = not applicable; nr = not reported

Source: Survey conducted by the Institute for Urban Economics for the Agency for Housing Mortgage Lending. Mail survey with intensive telephone follow-up. Initial sample consisted of the largest 200 banks in the country, as measured by own capital. The low response rate (12%) means that the information is likely not statistically representative for all 200 banks.

The dominant use of mortgage contracts is a change from even a year earlier when lease-purchase agreements were standard. These have lost favor because of their complexity and high cost to the borrower. Banks for which there is information are reporting default rates of 1% to 2%—very favorable by international standards.

Interest Rates, Loan Terms and Affordability

Many banks are making ruble-denominated loans but many others prefer dollar-denominated products, and a few offer both (see Table 1). The ruble loans are really fixed rate, indicating that the banks are betting on relative interest-rate stability. The dollar-denominated loans are indexed loans, and here banks are betting on interest rates on liabilities moving with the exchange rate—historically a poor bet in Russia (Kosareva and Struyk, 1996).

Nevertheless, this is some protection against interest-rate risk. Spreads between dollar interest rates on liabilities and assets were 10 to 12 percentage points during the first half of 1998 in order to cover liquidity, interest rate and modest credit risk.

Over the past two or three years loan terms have gradually lengthened so that most banks now offer a five-year loan and a few offer terms of up to 10 years. The size of the loan a borrower can support for a stated monthly payment depends on the interest rate and the loan term: lower interest rates and longer loan terms increase affordability.

The monthly payment on a loan of 10 years is about half that of a one-year loan. During 1995-1997, affordability increased due to favorable developments in both factors. Late 1997 and the first half of 1998 saw interest rates increase in response to general economic stability problems—and affordability correspondingly declined.

Even under the best conditions for affordability seen so far since 1992, perhaps 10% to 15% of all households could afford to purchase a new unit without accumulating very large savings. However, housing privatization changes this picture fundamentally.

Around 40% of all occupant families of state housing in 1991 (two-thirds of all units at that time) have privatized their units; many have thereby obtained a sizable equity endowment (Puzanov and Koutakova, 1997). These equity holdings are fueling a trade-up market which is expected to grow rapidly if and when the conditions for mortgage lending improve, i.e., foreclosure is straightforward, banks therefore are willing to lend more broadly and affordability increases.

THE LEGAL BASE

Two distinct legal constructs are relevant to the Agency's operations: the acts underlying its creation and the acts governing the use of mortgages in Russia.

The Agency

The Agency was first created by a Presidential Decree in December 1993, but it was activated by two Resolutions of Government in 1996.[3] The legislation assigns the Agency the tasks of being a liquidity facility for housing lending and organizing mortgage lending in Russia by setting standards on the loans it will purchase.

The Agency is created as an independent open joint stock company with the Government of Russia owning at least 51% of the shares. (Initially the Government is the sole shareholder.) One Government Resolution also names a Board of Supervisors which includes representatives from all the relevant government bodies, including the Securities Commission, as well as the Central Bank and five commercial banks. It is chaired by the Minister of Construction.

With respect to financial terms, the 1996 legislation authorizes an equity payment of 450 billion (old) rubles. It also states that the Government of Russia will fully guarantee debt issued by the Agency. (The guarantee is the primary reason for the requirement that the government hold majority interest.) The Agency's debt is not accorded any tax advantages. Following the initial payment of capital by the government, the Agency was registered in September 1997.

The Agency received its license in January 1999 from the Central Bank of Russia. The Agency applied for this status primarily because of the financial advantages of issuing debt as a non-bank financial institution rather than a joint stock company. In particular, a bank can count bond interest and some associated bond management fees as expenses in computing its taxable income whereas a simple joint stock company cannot. Having this license also places the Agency under the supervision of the Central Bank and facilitated obtaining Central Bank agreement for certain changes in banks' accounting for mortgage sales and pass-through interest payments.

Mortgage Law

The Law on Pledge was passed in 1992; along with laws covering administrative procedures, it provided a minimum base for mortgage lending. Part II of the new Civil Code, passed in December 1995, was significant in leaving many provisions to be filled in by the Law on Mortgage when it was passed.

The Civil Code also established that while the loans of mortgagors in default could be foreclosed, the mortgagor could not be evicted. The Law on Mortgage of July 1998 amends this provision so that the borrowers who pledge their housing unit as collateral in order to purchase it can be evicted for nonpayment.[4] The law completes the corresponding section of the Civil Code and generally establishes a reasonable basis for mortgage lending.

LOAN PRODUCT PURCHASED

The Agency will purchase qualifying loans, i.e., it purchases the right of claim. The mortgagee assigns ownership rights for the loan to the Agency; this assignment is registered, and the Agency takes possession of the original loan documents. The Agency in turn will assign servicing rights to the mortgagee under a trustee agreement. For reference, the counterpart U.S. model is the "Fannie Mae portfolio program."

While the Agency plans to purchase several types of loans eventually, it will begin purchasing one loan type. The principal attributes of the product will be as follows: It will be a conventional mortgage note and contract. Loans will be variable rate and dollar denominated. The interest rate will be tied to the interest rate on borrowed funds (LIBOR) and payments will be computed in dollars, then converted to rubles using the dollar-ruble exchange rate in effect on the day of payment.

As noted, dollar-denominated loans are commonly used in Russia. The dollar feature has the desirable effect of lowering the initial interest rate and increasing the size of the loan for which the borrower can qualify. (Other implications of this loan structure are discussed later.) There will be no interest rate or exchange rate caps.

The maximum loan-to-value ratio for a qualifying loan will be 70%. The minimum loan size will be $5,000 and the maximum loan size $70,000—in ruble equivalents. The Agency estimates that the average loan to be purchased will be about $30,000. Loan term is expected to be five to 10 years.

The Agency will enforce an 18-month lock-out period on prepayments. Initially only newly originated loans will be purchased; and loans will be purchased at par, i.e., the purchase price is the unpaid balance plus any interest charged to the borrower but not yet paid.

Banks will be required to use rigorous loan underwriting standards specified by the Agency. For an indefinite period, the Agency will do a secondary underwriting of all loans purchased and return to the originating banks those found not to meet its standards. Bank payments will be on a schedule-schedule basis, i.e., the servicing bank must make up any payment deficiencies on behalf of the borrower when submitting funds to the Agency.

LIABILITIES

The Agency will initiate operations by purchasing loans using its own capital. However, only $14 million of the authorized $80 million (fall 1997 exchange rate) of the government's contribution to equity was paid in. A small number of loans will be purchased in the first few months of operations so as to provide time to thoroughly test all systems.

Still, with the Agency's original business plan projecting funding requirements of about $30 million during its first 12 months of operation, it would soon commence funding purchases through borrowed funds.[5]

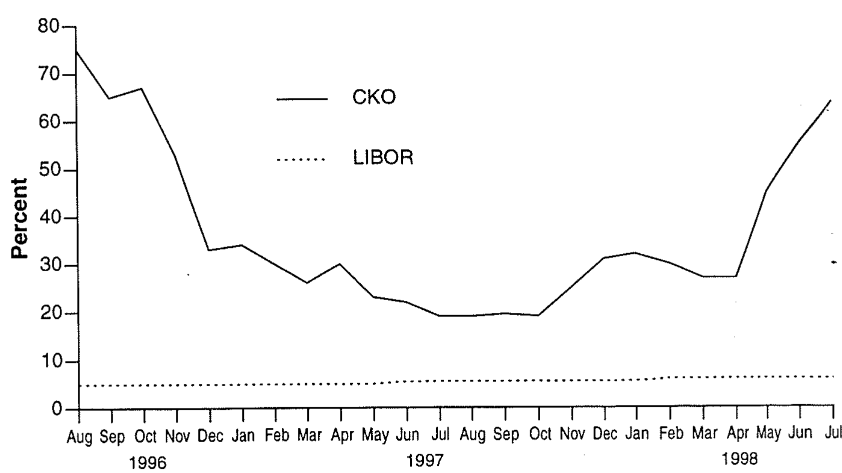
The Agency's plan before Russia's financial crisis of August-September 1998 was to borrow in international markets on the strength of its government guarantee. Two reasons contributed to its decision to seek international funding rather than accessing the domestic capital market: the price of international funds would be much lower to the Agency,[6] and international interest rates are dramatically more stable than domestic rates.

Price and Stability Are Key

Both of these points are clearly supported by Figure 1 which plots movements in annualized London interbank rates (LIBOR) and the benchmark Russian one-year government bond rates (GKOs) for the period August 1996 through July 1998.

The more important of the two factors for the Agency's decision was the volatility of Russian rates. Interest rates on longer term debt issues, such as two- and three-year bonds issued by sub-federal governments, have been substantially more stable, but the vari-

Figure 1. Weighted Average Yields on GKOs and Annualized One-Month LIBOR



Source: Fannie Mae, Analytical Information Agency AK&M

ability is still substantial.[7] Volatile interest rate movements result in large month-to-month or quarter-to-quarter changes in borrower payments, and this increases credit risk.

The Agency plans to develop a medium-term note program (MTN) under which about $1 billion in notes would be issued over a three-year period. The first issue will likely have a five-year term. Interest rates on the bonds would reset semi-annually, and the same interest rate adjustments would be used for the mortgages.[8]

The debt issues will be collateralized by loans purchased with the proceeds. But no strict pooling of a group of loans is planned to support a corresponding bond issue. A more definite structure will be developed in the future.[9]

Government Guarantee

Although the germane legislation states that the Government of Russia will provide a full guarantee of the Agency's debt, such a guarantee was not available in 1998 because guarantee authority was not included in the FY1998 federal budget. Such authority will be included in 1999, but it may be mid-year by the time all necessary procedures are developed and Ministry of Finance approval obtained.

The Agency will address this problem during its start-up phase by having the City of St. Petersburg, a Subject of the Federation (equivalent to a state in the U.S.), guarantee an initial loan of about $10 million.[10] Proceeds will be used to purchase loans originated by banks located in the city. Because of the leadership shown by the City of St. Petersburg, the first two banks from which loans are being purchased are located there: Promstroi Bank of St. Petersburg and Bank St. Petersburg. The Agency will expand its program to other cities when it completes its initial borrowing.

The August-September financial crisis in Russia caused the Agency to change the plans just outlined. It will be a minimum of six to nine months before a debt issuance carrying a Russian sovereign guarantee will find buyers at a reasonable price.[11] In the interim the Agency will pursue two sources of funding. One is a loan of $10 to $20 million from a multilateral or bilateral aid agency. The other is the placement of a few million dollars in dollar-denominated mortgage-backed bonds in the domestic market, probably with regional banks as the primary purchasers. Funding of this magnitude will permit the Agency to continue to purchase a modest number of loans and test its systems. Agency management plans a general reassessment of its overall funding strategy this spring.

DISTRIBUTION OF RISKS

Careful management of the several types of risk inherent in mortgage lending and secondary financing of mortgage loans is critical to the financial well being of a secondary agency. One component of a risk management strategy is the efficient allocation of risk among participants in these transactions. The following paragraphs outline the distribution of risks adopted in the Agency's scheme.

Interest-Rate and Exchange-Rate Risk

Most risk in these categories is being borne by the borrower through use of the variable-rate, dollar-denominated loan. As indicated above, given the stability of LIBOR, the risk from this quarter appears highly manageable. The Agency, however, will be exposed to interest-rate risk during the period between announcement of the new rate and the first monthly payment made under the new rate.

Exchange-rate risk is a larger question, as driven home by the events of August and September. A sharp devaluation of the ruble will produce payment shock and could result in widespread delinquencies in loan repayments. Banks' credit risk would rise sharply, possibly causing them to restructure loans and otherwise work with borrowers to prevent defaults.[12]

The Agency is acutely aware of this risk. Compared with many other countries, risk is mitigated in Russia by the extensive dollarization of the economy, including many white-collar professional salaries being denominated in dollars. Nevertheless, the Agency's standard training programs for participant banks now includes discussion of loan workouts in cases where there is a surge in monthly payments while incomes do not rise proportionately, but the fundamentals of the loan are still strong.[13]

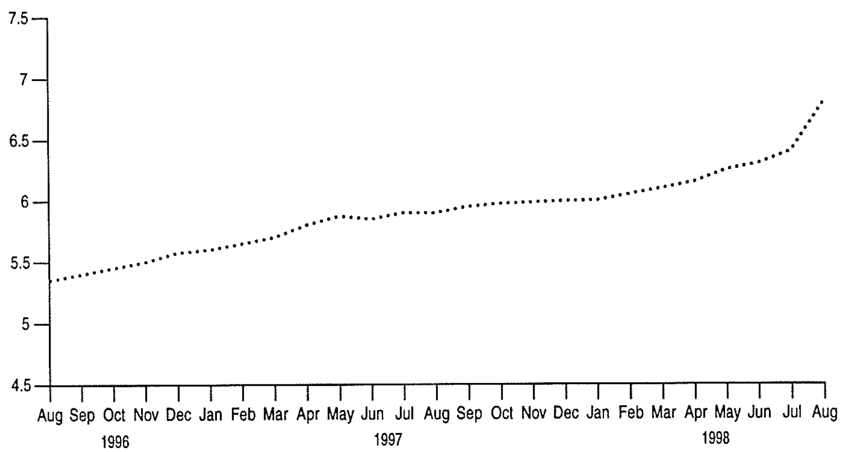
The likelihood of another large devaluation of the Russian ruble is extremely hard to judge. Over the three-year period, July 1995 to July 1998, the government and Central Bank succeeded in managing a gradual devaluation of the ruble rather than a precipitous fall (see Figure 2). However, the authorities lost control of the exchange rate in August 1998, and it is too early to predict what developments may be over the next six to twelve months.

Credit Risk

All loans purchased by the Agency will be with full recourse to the originating bank. Any loan delinquent for three months must be replaced by a qualifying loan or paid off by the bank. The Agency's view is that the lack of a documented historical experience of commercial banks with mortgage lending requires that participating banks be given very strong incentives to perform conservative underwriting and vigorous loan servicing.

Banks making mortgage loans to date have in fact been very selective in their lending

Figure 2. Monthly Average Dollar-Ruble Exchange Rates



Source: Analytical Information Agency AK&M

and typically require guarantees beyond the collateral afforded by the unit being purchased. Consequently, the default rate has been very low. The Agency wants to reinforce banks' existing good habits in loan underwriting. Later, when good default data are available, the Agency will consider shifting to a coinsurance scheme.

Prepayment and Refinancing Risks

There is very little data on prepayments of mortgage loans in Russia. The scant information which does exist suggest Russians have a proclivity to pay off loans as soon as they are able. If this really is the pattern, Russians resemble their Indian counterparts, who exhibit very high rates of prepayments as compared with the U.S., for example.[14]

Whatever the incidence of prepayments, this risk is being borne by the Agency. The Agency is protecting itself from early prepayments through the 18-month lock-out period, but this is only one element of its policies. A critical decision was to use a variable-rate instrument, which affects the situation in two ways. First, the incentive to borrowers to refinance loans will be much smaller than when loans have fixed interest rates. Second, because the Agency's debt is also variable rate, the size of its exposure is much smaller than if it were fixed rate.

The gross uncertainty about the incidence and pattern of loan prepayment complicates the Agency's decision about the term for which it should borrow funds. These difficulties will be exacerbated in the early years of operation by the bond term acceptable to investors and by the small volume of borrowings. If the Agency bond issuances were larger, it could issue several tranches of bonds with a range of maturities. This, however, will not be possible in the first two years at least.

Hence, the Agency is exposed to refinancing risk, i.e., the risk that if the Agency must borrow a second time to finance a given pool of loans, there may be an increase in the price of funds that is not reflected in LIBOR. This could occur, for example, if the market questioned the reliability of the sovereign guarantee or decided the Agency was not adequately managing its operations; the price of funds would rise sharply.

Quantifying the size of this risk is very difficult, in part for reasons discussed below. In any case, there is a very strong incentive to the Agency to do everything possible to maintain investor confidence in its financial integrity.

Counterparty Risk

The Agency is exposed to two forms of counterparty risk: those arising from its relations with originating banks and those associated with its reliance on the Russian Government guarantee in marketing its debt.

Banks as counterparties. By assigning credit risk to the banks originating and servicing the loans, the Agency is attempting to create a strong incentive for them to be vigilant in underwriting and servicing. To insure that banks are meeting Agency standards, the Agency policies call for it to carefully monitor loan underwriting, analyze the quality of monthly reports sent by the banks to the Agency on loans being serviced and perform on-site inspections of a bank's mortgage operations.

A second type of problem might arise from bank failure. Risks here can be controlled through contract. Because the Agency owns the loan, it will avoid entering extended bankruptcy proceedings to take possession of its loans. In this circumstance the Agency has the right to reassign loan servicing to another bank.

The third potential bank counterparty problem is a bank's failure to remit loan repayments to the Agency. In this case, the

Agency can take its enforceable contract to the courts, and it can reassign the loan servicing to another bank.

The Agency's risk is clearly greater if failure to make proper remittances is followed in a few months by bank failure. While the Agency can collect future payments, it may lose payments already made by the mortgagors but not remitted to it. The Agency plans to move to the courts with alacrity in the event of delayed bank remittances.

Government of Russia. The policies of the Russian government will have both direct and indirect impacts on the Agency. The indirect element is the credit rating assigned to sovereign debt of the Russian Federation. The recent financial crisis provides a dramatic illustration of the impact of mismanagement of Russia's economy on the credit rating of its sovereign debt. The impact on the Agency's ability to borrow and cost of funds is nearly identical.

The direct risk imposed by the government is its possible failure to provide the Agency with its guarantee, even though all formal necessary conditions are met, e.g., inclusion of the guarantee authority in the federal budget.

Over the past several years the State Duma has passed unrealistic budgets and the government has controlled the deficit by sequestering 20% or more of the appropriated funds. If this pattern persists, the Agency runs the risk of having the budget authority for its guarantee sequestered. This is, in a sense, a political risk: politics largely determine what programs are spared from the cuts.

THE FUTURE

The Agency for Housing Mortgage Lending is in its infancy. Management is acutely aware of the necessity of proceeding step-by-step to build volume. While the emphasis in the first few months of operations is of necessity on testing and trouble-shooting the loan acquisition and servicing process, the Agency is working hard to develop systems to control the various risks inherent in its operations. Over the next year or so, however, the greatest risks are those associated with potential instability in the Russian economy.

REFERENCES

Arnold, J. 1998a, "The Morning After: Russia's Own Companies Will Suffer Most from the Crisis," *Business Central Europe,* November p. 44.

Arnold, J. 1998b, "Money for Nothing: Are Lenders Prepared to Throw Yet More Money at Russia?" *Business Central Europe,* December, p. 39.

Chandler, C. 1998, "Russian Dreams Become Nightmares: Flood of Foreign Fund Failed to Propel Nation into Modern World," *The International Herald-Tribune,* August 29–30, p. 9.

Graffam, R.D. 1996, "A Case Study in International Securitization: Meeting the Needs of Developing Nations," in L.T. Kendall and M.J. Fishman (eds.) *A Primer on Securitization.* Cambridge: MIT Press, pp. 153–70.

Kosareva, N., and R. Struyk, 1996, "Emerging Long-Term Housing Finance in Russia," *Housing Finance International,* March, pp. 20–30.

Lea, M. (ed.) 1998, *Secondary Mortgage Markets: International Perspectives.* Chicago: International Union for Housing Finance.

Myberg, M. 1996, "The Use of Securitization by Investors and Issuers in International Markets," in L.T. Kendall and M.J. Fishman (eds.) *A Primer on Securitization.* Cambridge: MIT Press, pp. 139–152.

Puzanov, A., and T. Koutakova, 1997, "Privatizing Housing and Creating Homeowner's Associations," in R. Struyk (ed.) *Restructuring Russia's Housing Sector: 1991–1997.* Washington, DC: The Urban Institute.

Struyk, R., G. Kenney, and M. Friedman, 1990, "Mortgage Prepayment in India," *Housing Finance International,* May, pp. 39–43.

Struyk, R., and N. Kosareva, 1993, "Developing the Russian Housing Finance System," *Housing Finance International,* March 1993, pp. 2–9.

NOTES

[1] For a description of the early development of mortgage lending, see Kosareva and Struyk (1996) and Struyk and Kosareva (1993).

[2] In the past 10 years, numerous countries have created secondary facilities or have considered doing so. See, for example, Myberg (1996) and the articles in Lea (1998).

[3] Presidential Decree No. 2281, "On Developing and Implementing of Extra-Budgetary Forms of Investment into the Housing Sphere," December 24, 1993. Russian Federation Government Resolution No. 753, "On the Federal Targeted Program 'Your Own Home'," June 27, 1996. Russian Federation Government Resolution No. 1010, "On Agency for Housing Mortgage Lending," August 26, 1996.

[4] The Law on Mortgage of 1998 is the same as the law passed by both houses of parliament a year earlier but which was vetoed by

the President because it contained a provision prohibiting the mortgage of agricultural land. In 1998, the parliament overrode the President's veto after negotiations with the Administration over changes to the law proved fruitless.

[5] The Agency's management decided not to accept private contributions to its equity—most likely from large banks—until its operations were firmly established, in order to avoid the appearance of preferential treatment of the equity holders.

[6] The price to the borrower is higher, however, since he/she must in effect purchase dollars with rubles and therefore pays for increases in the ruble:dollar exchange rate.

[7] We attempted to construct an interest rate series for three-year bonds for the past two years but this proved impossible because of the heterogeneity of the specifics of the issues, the collateral underlying them and the creditworthiness of the issuing municipalities and Subjects of the Federation.

[8] Under the standard variable-rate bond regime, the interest rate in effect for the next six months is set based on LIBOR in effect five working days before the start of the period.

[9] There will, however, be segregation of assets and liabilities into homogeneous classes. For example, the assets and liabilities of ruble-denominated mortgages will be segregated and managed separately from assets and liabilities associated with dollar-denominated mortgages. These might be termed "soft pools."

[10] At this writing the guarantee has been formally approved by the Governor of the City and is awaiting the concurrence of the City Duma.

[11] Judging from the commentary in the financial press during the crisis, the time required for investor confidence to recover could be even longer. See, for example, Chandler (1998), Arnold (1998a, 1998b).

[12] Borrowers will make payments in dollars and the banks will remit dollar payments to the Agency. Therefore, the Agency is not bearing exchange risk in the payment process.

[13] A policy decision not yet made is whether the Agency will permit loans it owns to be the subject of a workout as long as banks made full payments to the Agency, or whether the Agency will require repurchase of all loans for which payments are three or more months delinquent.

[14] See Struyk, Kenney and Friedman (1990) for information on India.