Emerging Mortgage Finance in Armenia

By Raymond Struyk, Friedemann Roy, Carol Rabenhorst and Alexander Kopeiken[1]

INTRODUCTION

The broad availability of mortgage finance accelerates the pace at which households improve their housing conditions by permitting them to leverage their current income and savings. While there were a few long-term housing loans in the former Soviet Union, such loans were really little more than an element of centrally allocated credit.[2] So, Armenia, like the other former Soviet republics, entered the transition period with no tradition of mortgage lending. The development of such lending has been hampered by the immaturity of the banking sector and macroeconomic setbacks.

Stability and impressive growth rates have been the key Armenian economic characteristics of recent years (see Table 1). Under these conditions the demand for housing has expanded and can be expected to continue to grow. The Central Bank of Armenia (CBA), the Ministry of Finance and Economy (MoFE), and the private banking sector all recognize the need for improved mortgage finance services to augment this demand. They see the commercial and development opportunities that development of mortgage lending entails. In recent months there has been an impressive degree of discussion and planning about how to undertake this improvement, as evidenced by the frequent articles in the news media on trends and development and the preparation of concept papers by the CBA and MoFE.

This is the appropriate time, therefore, for a systematic analysis of how private mortgage lending can develop in Armenia. This article summarizes the results of such an analysis. The analysis was prepared as the response of KfW (Kreditanstalt fuer Wiederaufbau) to a request from the Government of Armenia to develop the concept for mortgage market development, building on the work already done by Armenian experts.

To set the stage for the discussion of the development of mortgage market, the balance of this introduction outlines the general economic and housing situation in Armenia in which mortgage market development will occur.

Macro-economic Environment

Armenia's early transition was exceptionally difficult. Its economy was battered by three separate factors. First, the country was still trying to recover from its severe 1988 earthquake. When the Soviet Union dissolved in 1991, assistance from the USSR came to an abrupt halt and resources that could be spared had to be allocated to this disaster zone. Second, the Nagorno-Karabak conflict drained resources from the private economy to the battlefield and severely isolated Armenia economically. Third, Armenia like other former Soviet republics began the "shock therapy" transition to the market economy. The impact of this combination was devastating, as shown in Table 1.

Table 1. Growth in Real GDP and Consumer Prices, 1999-2003
(annual percentage change)

Year	Gross domestic product	Inflation
1990	-7.4	10.3
1991	-11.7	274.0
1992	-41.8	1,346.0
1993	-8.8	3,732.0
1994	5.4	5,273.0
1995	6.9	176.7
1996	5.9	18.8
1997	3.3	13.8
1998	7.3	8.7
1999	3.3	0.6
2000	6.0	-0.8
2001	9.6	3.1
2002	12.6	1.1
2003	13.0	8.6
2004*	7.0	3.0
2005-08*	6.0	3.0

* Projected

Sources: UNDP, Growth, Inequality and Poverty in Armenia, 2002; data for 2002-2008 are from IMF sources.

From the year 2000, the economy has steadily improved and has grown at very respectable rates for the past three years. Reflecting the huge underutilized capacity in the country, inflation has remained low-to-moderate despite the strong economic growth. (The spike in 2003 is attributed to a supply-induced increase in the price of

[1] Mr. Struyk and Ms. Rabenhorst are, respectively, Senior Fellow and Senior Research Associate at the Urban Institute in Washington. Mr. Roy works with the Verband der Privaten Bausparkassen (Federation of Private Savings Banks), Berlin, and Mr. Kopeikin works at the Institute for Urban Economics, Moscow. The work reported here was done under contract with KfW Entwicklungsbank. The views presented are those of the authors and may not be those of KfW, the Urban Institute, the Institute for Urban Economics, or der Verband der Privaten Bausparkassen.

[2] See, K. Kosareva and R. Struyk, "Emerging LongTerm Housing Finance in Russia," *Housing Finance International,* vol. 10, no. 3, 1996, pp. 2030.

bread.) There is a general sense that growth has been concentrated in Yerevan. Some observers think that increased levels of international aid will result in realized growth in the next years over the levels projected in the table.

Still, household incomes remain at low levels. In 2002, per capita Gross National Income (GNI) was $790 according to the World Bank.[3] On the other hand, poverty rates were very high: 49 percent of households lived in poverty and 17 percent in extreme poverty.[4]

With respect to the financial system, a low degree of monetary depth and intermediation activity are common among the so-called CIS-7 countries, the poorest of the successor states to the Soviet Union that include Armenia (Table 2). The CIS-7, as a group, compares poorly even with the countries of Southeastern Europe, not to mention Central and Eastern Europe. Low intermediation is associated with higher interest rates and bank spreads.[5]

Table 2. Indicators of Financial Debt in Selected Countries, 2002[6]

Year	M2/GDP	Bank assets/GDP	Deposits/GDP
CIS-7[7]	13.8	18.3	10.7
SEE[8]	35.4	45.5	23.5
CEE+B[9]	49.3	74.4	47.9

Further data, specifically for Armenia and selected Eastern European transition economies, Russia, and two western European countries, are presented in Table 3 for 2002. These figures illustrate the challenges remaining for Armenia's financial markets to become deeper and more efficient. The magnitude of Armenia's interest rate spread and risk premium on lending figures are particularly noteworthy. At the end of 2003, the CBA reported spreads on AMD and dollar deposits and loans of 17.8 and 14.9 percentage points, respectively.[10]

Improving financial depth is important beyond the housing sector because of its

Table 3. Selected Indicators of Financial Depth and Efficiency, 2002[11]

Country	Domestic credit from banking system/GDP	M3/GDP[12]	Interest rate spread[13]	Risk premium on lending[14]
Armenia	7.3	15.6	11.5	6.4
Russia	26.6	26.2	10.8	3.0
Hungary	53.0	47.2	2.8	1.3
Lithuania	18.3	29.3	5.1	3.1
Slovenia	46.0	55.6	4.9	4.4
Denmark	155.6	51.0	4.7	NA
Germany	144.7	NA	7.0	6.7

[3] "Armenia Data Profile," http://devdata.worldbank.org/external.CPProfile.asp?Selected Country=ARM&CCODE=A…

[4] Per capita adult equivalent poverty lines in 2002 were 8,336 and 12,122 drams, respectively. The exchange rate in August 2004 was about 515 drams = $1. Poverty figures are from, Government of Armenia, Social Snapshot and Poverty in Armenia: Statistical Analytical Report, 2004. In the region, these poverty rates are substantially lower than those in the Kyrgyz Republic and Tajikistan but higher than those in Azerbaijan and Georgia. Source:IMF and World Bank, "Recent Policies and Performance of the Low-Income CIS Countries: An Update of the CIS-7 Initiative." (Washington, DC: World Bank, April, 2004).

[5] G. De Nicolo, S. Geadah, and D. Rozhkov, "Bridging the Great Divide: Poorly Developed Financial Systems in the CIS-7 Countries May Jeopardized Their Sustained Growth," Finance and Development, December 2003, pp. 42-45.

[6] Source: ibid., except Armenia where the data come from the Central Bank.

[7] Armenia, Azerbaijan, Georgia, the Kyrgyz Republic, Moldova, Tajikistan, Uzbekistan

[8] Albania, Bosnia and Herzegovina, Bulgaria, Yugoslavia, Serbia, Macedonia, Romania, Croatia.

[9] Central and Eastern Europe and the Baltic States: Croatia, Czech Republic, Hungary, Poland, Slovakia, Estonia, Latvia, and Lithuania and Slovenia..

[10] CBA, Annual Report, 2003, p.43, draft.

[11] Source: World Bank, World Development Indicators, 2004, Table 5.5.

[12] Also called liquid liabilities, it is the sum of currency and deposits in the central bank (M0), plus transferable deposits and electronic currency (M1), plus time and savings deposits, foreign currency transferable deposits, certificates of deposits, and securities repurchase agreements (M2), plus traveler's checks, foreign currency time deposits, commercial paper, and share of mutual funds or market funds held by residents.

[13] Lending minus deposit rate, in percentage points.

[14] Prime lending rate minus treasury bill rate, in percentage points.

clear relationship with sustained economic development. At the same time it is important to note the positive role that development of mortgage lending can play in increasing financial debt.

After a period of instability beginning with the transition, the commercial banking sector has gained its footing. Some further consolidation among the 20 existing banks is anticipated as banks must meet higher capital requirements in July 2005.

In terms of the consolidated balance sheet of commercial banks, both assets and liabilities are highly concentrated in short-term instruments. As of June 30, 2004, only about 10 percent of liabilities and 13 percent of assets had maturities of over one year.[15] Many of the longer-term resources and loans are associated with term loans by international agencies in support of targeted lending programs, such as lending to small enterprises.

The banking system is extremely liquid: the ratio of highly liquid assets to total assets was 44.6 percent in June 2004, compared with a CBA required level of 20 percent. There is some expectation that liquidity will decline over the next two years as banks increase consumer lending. Loans constitute about 36 percent of assets, of which about one-third are consumer loans.[16]

The banking system has large volume of dollar liabilities and assets. For example, at the end of 2003 dollar or other foreign currency deposits and FX inter-bank liabilities accounted for 31 percent of total liabilities.[17]

The Housing Sector

The housing sector in Armenia has several defining characteristics:[18]

- Thanks to the housing privatization program, 96 percent of the stock is privately owned and the owner-occupancy rate is very high.
- Multifamily buildings are in poor physical condition owing to a combination of poor construction and truly minimal maintenance since 1990. Condominium associations are present in many buildings but generally are ineffective. City maintenance companies remain responsible for building maintenance in many places. Maintenance tariffs are insufficient to cover costs and collection rates are low; so municipalities are expected to cover the difference. Company performance is very poor.
- Relatively few units transfer in a year: only 2 – 3 percent of the stock changes hands annually. Real estate agents are involved in only one-third to one-half of transactions.
- New housing construction is essentially a private activity. In terms of the sources of finance for housing construction in 2003, the State budget accounted for only 0.4 percent of completed housing. International donors and private Armenia households each accounted for 47 percent.
- Only a small share of unit purchases involve mortgage finance; mortgage origination is concentrated in Yerevan.
- Building standards and the cost of new housing are high relative to the incomes of many households.
- Despite the destruction of the earthquake and other disasters, there is not an absolute shortage of housing units, owing substantially to a large out migration since independence. This is confirmed by the successful use of housing purchase certificates for existing units in the earthquake zone.[19] Nevertheless, the average square meters per person was only 17.7 in 2002. This compares with 16.6 and 12.5 m^2, respectively, in Kazakhstan and the Kyrgyz Republic.[20] In 1989 in Armenia, the values were 16 and 13 m^2, in urban and rural areas, respectively.[21]

The government's attention is currently being directed to three priority tasks. The first is to finish the provision of replacement units to victims of the 1988 earthquake. This task is nearly done, following substantial contributions from various donors over the past few years. The second is to improve the maintenance and renewal of multifamily housing. This is a pressing task and the strategy for doing so has yet to be developed. The third task is to address the needs of an estimated 13,000 families for whom the State has responsibility to provide replacement housing. These include refugees from the war with Azerbaijan, families who are victims of smaller earthquakes and land subsidence, families in the earthquake zone living in temporary units (domics) not eligible for housing under the earthquake programs, and similar groups. Beyond this there are a

[15] Deposits are relatively concentrated in demand deposits. In Armenia, at the end of 2003, 44 percent of household deposits and 54 percent of legal entity deposits were demand deposits. In the Czech Republic the parallel figures in mid-2004 are 35 and 39 percent, respectively. Data for the Czech Republic are from the Czech National Bank's ARAD Data Series System on its web site.

[16] Figures provided to the study team by the Central Bank of Armenia. Importantly, loan delinquencies are modest, at 1.4 percent of loan volume, with two-thirds of this under three months.

[17] CBA, Annual Report, 2003, draft, statistical table 9.

[18] Economic Commission for Europe. Country Profiles on the Housing Sector: Armenia. Geneva: ECE, 2004.

[19] S. Anlian and R. Struyk, "Home Purchase Certificates: The Other Housing Vouchers," European Journal of Housing Research, vol. 3, no. 3, 2003, pp. 227-41.

[20] Source: Institute for Urban Economics, "The Environment Millennium Goal (MDG) in Europe and Central Asia, Degraded Housing Target, Synthesis Report." Moscow: Institute for Urban Economics, 2004.

[21] S.J. Anlian and I. Vanian, "Armenia: Reform Amid Crisis," in R. Struyk (ed.), Economic Restructuring of the Former Soviet Bloc: The Case of Housing. Washington, DC: Urban Institute Press, 1996, pp. 307-39.

Table 3. Estimated Mortgage Lending Volume, 2002-2004 (in USD millions)

Year	CBA	Lender Questionnaire		
	(total)	Home purchase	Home improve.	Total
2002	2.8	1.4	0.3	1.7
2003	7.1	3.8	0.4	3.9
2004 (est.)	NA	13.0	1.9	14.9

Source: CBA and Lender Questionnaire

number of improvements in the law governing the housing sector that are needed.

There are four factors that can be counted on to drive private demand for new housing over the next few years:

1. Growth in household incomes that is driven by domestic growth and by remittances from diaspora Armenian community and workers temporarily abroad.

2. The small size of units in the existing housing stock: in 2002, 54 percent of all units were in 1- and 2- room units;[22] under standard Soviet designs a 2-room unit contains 54 sq.m., tight for large Armenian families.

3. Widespread under-maintenance of multifamily housing in the past decade, that makes families dissatisfied with their current arrangements, and

4. Real estate being seen as a good investment, as suggested by the price increases in Yerevan in recent past—50 percent in 2003 and 14 percent in the first half of 2004. These extraordinary gains give some cause for concern about future price volatility.

THE CURRENT SITUATION

According to information provided by banks and credit organizations (non depository financial institutions) in a questionnaire distributed by the CBA for this project,[23] 11 of 20 commercial banks and 3 of 7 credit organizations are now originating mortgage loans for home purchase.[24] Lending is relatively concentrated, with the four largest lenders expected to account for 70 percent of loan volume in 2004. Competition appears to be moderate—banks are very aware of what their competitors are offering and adjust their terms accordingly. The degree to which borrowers actively shop among banks is not clear.

Loan volume

The CBA does not collect data on mortgage lending separately from overall lending. So there are no hard figures available. Table 3 presents two estimates of loan volumes in recent years—the CBA's estimates for 2002 and 2003 and the responses of respondent lenders in the questionnaire for 2002-2004. The CBA figures are much larger for the first two years, possibly because they include mortgage lending for business purposes in addition to home purchase or improvement.

In any case, the rapid expansion of mortgage lending is confirmed by the figures in the table. Anecdotal evidence indicates the prepayment rates are high, which will reduce the ratio of the stock of loans outstanding to originations compared with of Western Europe and North America.[25]

According to the questionnaires and interviews, there were 7 mortgage lenders (bank and credit organizations) in 2003, 10 in 2003, and 14 in 2004.

Despite the impressive growth rates, mortgage lending is a small share of bank assets. In 2003, using the CBA figure, outstanding loans were 1.4 percent of commercial bank assets. Based on interviews with mortgage lenders, mortgage loans accounted for 3-5 percent of assets at the end of 2003.[26] But for the largest lender,

[22] Special tabulations prepared for the team by the Armenian National Statistical Service.

[23] Completion of the questionnaire was voluntary. We learned when we visited HSBC, the largest mortgage lender, that it had decided not to fill in the form. We were able to fill in some key data for it through responses provided in the interview.
The CBA could not identify which banks filled in the forms to us because of bank secrecy considerations.
There were a number of inconsistent or questionable responses provided. The team requested clarifications through CBA staff and generally these were provided. Nevertheless, in some instances answers had to be omitted and occasionally we corrected what appeared to be an obvious error.
The data obtained from the survey were augmented through interviews with six banks.

[24] According to the questionnaires and interviews, there were 7 mortgage lenders (bank and credit organizations) in 2003, 10 in 2003, and 14 in 2004.

[25] Mortgage prepayment rates are not well documented in the literature. One exception is, R. Struyk, G. Kenney, and M. Friedman, "Mortgage Prepayment in India." Urban Institute Paper 3641-07-3B, September 1988. Summary published in Housing Finance International, May 1990, pp. 39-43. For Ukraine, Diamond reports that most borrowers repay at accelerated rates, with the actual term on a 10-year loan being close to 5 years.

[26] This question was not included in the survey. So we only have information for banks interviewed.

Table 4. Home Purchase Loan Characteristics and Requirements

Characteristic	Typical value	Range	
		Minimum	Maximum
Fixed or variable interest rate	Fixed	—-	—-
Dollar or AMD	Dollar	AMD 2/13	Dollar 13/13
Interest rate	18%	14%	24%
Maximum LTV	50%	50%	85%
Term (years)	4-5	3	7
Max. payment-to-net income	50%	40%	70%
Requirement	Share of respondents		
Life insurance required?	3/13		
Property insurance?	7/13		
Account with bank?	2/13		

Source: Lender questionnaires and interviews with lenders. On the whole, 13 lenders filled out the questionnaire.

they were under 1 percent of assets. And for a small bank, they were 11 percent.

Loan characteristics

The average size of loans for home purchase mortgages is modest. The unweighted average loan amount, i.e., the sum of the average loan amounts reported by the lenders divided by the number of lenders, for 11 lenders providing a response is about $13,000. Two respondents gave values of about $6,000 and one as high as $25,000. There is a wider spread on responses for the "average larger loan" amount: 7 gave a figure of $20,000 or less and 2 said $100,000. Smaller loans range from $1,500 to $9,000.

Lending is overwhelmingly for existing units. Of 11 lenders who answered a question on the share of their loans used to purchase new units, only two gave a value other than zero and these two reported 10 percent and 20 percent.

The standard loan product is a dollar loan with a fixed interest rate. (See table 4.) Some lenders offer AMD loans as well, but they are a definite minority. Interest rates on mortgage loans reported by lenders show a very wide range and it is hard to know if they really vary so widely. When asked about interest rates during interviews, typically a single rate was named or a very small range, e.g., 16-17 percent.

Eight of 13 responding lenders stated a maximum LTV of 50 percent. Only two went as high as 80 percent. Such low LTVs provide banks with a large measure of security in case of default.

Loan terms are short—a maximum of 7 years, which was just introduced—with corresponding consequences for housing affordability. Maximum monthly payment-to-net income ratios are high, reflecting the fact that lenders believe that most borrowers have significant income that cannot be conventionally documented.

Only two banks require that the borrower have an account with the bank; one requires a business relationship of a minimum of one year. Surprisingly few lenders require that the borrower take out life or even property insurance to protect the bank against unforeseen problems. Mortgage default insurance does not exist in Armenia; and title insurance is viewed as unnecessary, given the responsibilities of the State in case of errors in the cadastre.

Risk management

The following summarizes current practices with respect to the current handling of mortgage lending risks in Armenia.

Credit Risk

Weak points

- With banks lending only for a couple of years, experience with default and foreclosure is limited. The limited experience to date suggests that in case of foreclosure banks will prevail in the end but the time required to recover the property of the defaulted borrower, free of occupants, can be a year or more.
- The liquidity of residential property outside Yerevan is limited.
- There appears to be a wide variance in the quality of loan underwriting. Some banks do not require life insurance and some not even property insurance. Formal underwriting procedures may be weak at least at some banks.
- Loan documentation is highly variable, although the scope of the assessment did not include examining individual bank documents in detail.

- The quality of loan servicing is not entirely clear to the team, but there may be insufficient emphasis on following-up with delinquent borrowers.

- There is no systematic training of bank staff in mortgage lending by the CBA or anyone else. Some banks have formal internal training programs but this appears to be exceptional.

- Prices in the real estate market are potentially volatile, particularly in Yerevan, after the sharp run up in prices over the past two years. A downturn in the Russian economy could be particularly damaging to the economy and loan repayment, given the volume of remittance income originating there.

- There is concern about the independence of appraisers.

Strong points

- The legal basis for mortgage lending is serviceable, thanks to improvements enacted in the recent past. Moreover, salient existing problems in the law are recognized and a working group is preparing the necessary amendments to address several of these. Nevertheless, work remains for the future.

- Banks are making loans with low LTVs (loan to value ratios).

- The title and lien registration system is generally working effectively.

- A credit bureau operated by the CBA is providing reports to banks on loan applicants at a reasonable fee. Coverage of individuals' payment history is limited. A private bureau that may provide more comprehensive assessments is under development.

- There appears to be a culture in favour of paying one's debts, stemming in part from strong family bonds.

Interest rate risk

Weak points

- Interest rates are fixed for the life of the loan (now 4-7 years); loans are dollar denominated.

- This risk is large and essentially unmanaged. The large spreads between the cost of funds and mortgage lending rates may systematically incorporate a premium for this risk, but this is doubtful.

Strong point

- It appears that the risk will be mitigated by high prepayment rates. At present the experience may be driven significantly by the high interest rates (around 15 percent now but they were significantly higher a year earlier). But durations may be quite low even under lower rates.

Liquidity risk

- The banking system is highly liquid overall. But a large share (45 percent at the end of 2003) of liabilities are in demand deposits.[27]

- Mortgage loans are highly illiquid because the total lack of standardization in loan documentation and procedures.

- The contract savings scheme is potentially subject to liquidity problems. In the first instance there may be insufficient funds to make timely mortgage loans to savers who have completed their contracts. Ultimately discouraged savers could withdraw their funds and this could cause a major problem for the scheme.

Exchange rate risk

- There is little exchange rate risk associated with the dollar denominated mortgage loans per se, because a substantial share of all bank liabilities are in dollars.

Prepayment risk

- It appears that Armenian households may have prepayment patterns, independent of interest rate declines, closer to those of other countries in the region and further East than to the U.S. or Western Europe.

  A few banks have tried to impose prepayment penalties, but these are being rejected by borrowers.

Findings on related topics

Additional key information on the current situation includes the following:

- Capital market development is quite limited, although substantial infrastructure for expansion is in place. The market is heavily dominated by government securities and is likely to remain this way for a considerable time. Mortgage bonds of some form could stimulate further market development.

- Real estate brokerage is developing fairly rapidly but issues of professionalism remain and coverage outside of Yerevan is limited.

- To date the Government has not had explicit policies regarding mortgage lending. A strong point is that there are no subsidies for homeownership or to support mortgage lending. The Ministry of Urban Development has been and will continue to provide dwellings, either through new construction or home purchase certificates, to well defined housing deprived household groups. It has no plans to support other households to acquire dwellings.

Overall assessment

For such a recent line of lending activity, mortgage lending is developing along generally desirable lines. As the foregoing indicates, however, a large number of

[27] Includes AMD demand deposits and all FX deposits, because FX deposits are not broken down between demand and time in the CBA data consulted. Time deposits are about 35 percent of all AMD deposits.

challenges face the system. The favourable economic environment may be encouraging banks to underestimate the risks associated with this lending and to be devoting fewer resources (including underwriting requirements to borrowers) to risk management than is prudent. It is clear that there is much work to be done to consolidate the gains made to date.

LONG-TERM FUNDING FOR MORTGAGE LENDING

The need for long-term funding, obtained from capital markets, is clear. However, it is our judgment that it will take three to four years for the issuance of mortgage-backed bonds to be properly prepared and for the primary market to be sufficiently mature to provide qualified mortgages for bond collateral. The credit risk issues noted above are particularly important, along with standardization. Work on preparing for bond issuance can start anytime, as a thorough and thoughtful process to establish an effective system will be time consuming. The GOA could have a legislative schedule that accommodates this reality. (If no encouraging actions are taken, it will likely take longer than three to four years).

The CBA and the MoFE have developed concept papers for the development of mortgage lending that address this issue.[28] The CBA favours creation of a secondary facility. The MoFE, on the other hand, proposes issuance of bonds backed by mortgage securities by commercial banks and credit organizations. We see no reason why a program of issuance of mortgage bonds by lenders could not co-exist with a secondary facility. Indeed, the development of the two mechanisms is likely to be complementary.

Both approaches address the interest rate and liquidity issues cited above. They also would permit banks to extend their loan terms, thereby sharply increasing the share of households who could afford to purchase a unit.

Bank/Credit Organization issuance of mortgage collateralized bonds

Issuance by banks of bonds collateralized by pools of mortgages during the next few years has several potential problems:

- Banks appear to lack the skills necessary to manage the relatively complex risks associated with issuance of such bonds. Until there is greater experience with prepayment patterns, this risk will be particularly challenging to manage in a mortgage-bond context.
- If bond issuance goes ahead without proper preparation, there are more likely to be problems that would discourage investors from purchasing similar bonds for some years to come.
- There is reason to expect banks to have to pay relatively high interest rates to investors: it will be expensive for investors to understand the features of the mortgages collateralizing the bonds because of the different origination and servicing practices and documentation of each bank. Individual bank issues are likely to be illiquid, again pushing up the price demanded by investors.

These factors suggest that finding buyers for the bonds at any price may be difficult in the absence of credit enhancements, such as a government guarantee—which should be avoided.

To improve the information about bond issues available to investors and thereby increase their confidence and to help manage certain risks, the team believes that at least initially only mortgage-collateralized bonds that meet certain standards set by the legislation should be issued. The standards would be similar to those mandated for German Pfandbriefe, with certain adjustments for the Armenian situation. This requirement in no way would limit banks' freedom to issue other bonds.

Operation of a mortgage-purchase and bond-issuance facility

Creation of a liquidity facility that requires that the mortgages it purchases or loans against are rigorously underwritten and serviced to well-defined standards and that has the participation of a respected international entity or the Central Bank would overcome the investor confidence problems outlined above. Indeed, its operations could pave the way for banks to be able to issue their own mortgage-backed bonds.

Importantly, the facility's mortgage standards would "organize the market" by giving a concrete reward for banks to participate in a process of loan documentation, underwriting, and servicing standardization that is otherwise largely absent. The facility could in principle refinance mortgages from all banks, thereby fostering competition in mortgage origination.

Critically, it is more likely that one specialized facility will be able to devote the necessary resources to managing the various risks associated with the issuance of mortgage-backed bonds than several individual banks. We favour a facility that would purchase mortgage loans from originators rather than one where the facility refinances loans that remain with the banks through "advances" along the U.S. Federal Home Loan Bank model, now used in Jordan and elsewhere, because the facility manages prepayment risk when it purchases the mortgages.[29] Otherwise this task remains with the lenders who we believe are not well equipped to handle it.

Explicit or implicit government guarantees should be avoided. We believe that the facility should have private ownership—

[28] MoFE, "Concept of Development of the Mortgage Market in Armenia." Yerevan: 2004, draft. CBA, "Concept of Morrtgage Market Development in the Republic of Armenia." Yerevan: no date, draft.

[29] D.B. Diamond, "Creating a Secondary Mortgage Facility for Jordan," *Housing Finance International*, June 1996, pp. 3-9.

international donor agencies, domestic banks and perhaps others—although it would not necessarily require this at the outset. A year or so following its founding may well be needed to organize such participation. To give the public confidence in the agency's bonds, the bonds would be guaranteed by an international donor finance agency for an initial few years. Management would be private but overseen by a board representing the shareholders noted above. The CBA would be the supervising authority.

We emphasize that it will be three or four years, perhaps even longer, until conditions are right for the issuance of bonds collateralized by mortgages by any facility. More experience is necessary with primary lending. Standardization is absolutely essential and then a stock of mortgages conforming to the standards has to be originated.

Contract savings scheme for housing

By creating a special circuit of funds, a contract savings scheme, such as the German bausparkassen system, provides lenders with stable long-term funds that can substantially address interest rate risk and some types of liquidity risk.[30] A principal advantage of the system is that marginally qualified borrowers are able to prove their creditworthiness by meeting the term of their savings-loan contract during the savings period. This could be an important factor in Armenia.

That said, banks generally did not express strong interest in offering this scheme as a home purchase product, mostly because they did not think purchasers would be willing to wait for a multi-year savings period to obtain a loan. On the other hand, some expressed interest in the product as a vehicle for financing home improvement loans. Contract savings schemes appear unlikely to have a significant role for banks in managing the risks of mortgage lending.

CONCLUSION

Mortgage lending in Armenia holds the promise of being a major line of profitable lending for commercial banks and credit organizations. This promise is more likely to be realized if attention is concentrated on development of the primary market over the next few years, while preparatory steps are taken to improve risk management for the future.

[30] For CSH, liquidity problems may arise in case there may be insufficient funds to make timely mortgage loans to savers who have completed their contracts. Ultimately discouraged savers could withdraw their funds and this could cause a major problem for the scheme.