Improving the conditions for residential mortgages in Ukraine: An analysis of mortgage lending opportunities and selected interventions – A case study

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1. Introduction

The purpose of the article is two fold: firstly to describe how to analyze mortgage lending opportunities in an emerging country with Ukraine as an example, and secondly as a case study to elaborate on approaches to intervention and how the intervention in three selected areas is currently being carried out in a project supported by the European Union.

2. Project description

"Establishment of Mortgage Market Rules and Legislation - Ukraine" is a project funded by the European Union . The overall objective of the project is : "Develop an appropriate regulatory framework that assists the mortgage loan market to come into being through creating a platform of dialogue between the private sector and authorities on regulation of the now evolving market, and to contribute to the transfer of know-how of mortgage markets in other countries to private and public stake holders in Ukraine"

The end beneficiary is : "the citizens of Ukraine who through the increased availability of affordable financing opportunities can maintain and refurbish their existing accommodation and hereby both improve their living conditions and reduce the energy used for heating."

The Project has the following five main components:

1. Institutional development of The Ukrainian National Mortgage Association (UNIA)
A powerful and sustainable mortgage association is crucial to ensure the development of a sound, efficient and reliable Ukrainian mortgage system. Moreover, this is also vital for the technical assistance provided under the current EU funded Project for the below components to be as productive and effective as possible.

2. Strengthening the Ukrainian mortgage structure.
The project will facilitate an analysis of mortgage market development among local stakeholders and support them in developing the most appropriate structure for Ukraine.

3.Development of rules, regulations and mortgage standards for the Ukrainian mortgage system.
A sound legal environment, consistency and a systematic approach to rules and standards form a basis for effective mortgage market structure development.

4.Development and implementation of training programmes on mortgage related topics.
Training sessions, seminars and workshops constitute an integral part of several components of the Project. To a large extent, the success of the Project will depend on the transfer of knowledge and increase in capability within a large number of Ukrainian beneficiaries.

5.Market information on the Ukrainian mortgage lending system.
Public awareness about mortgages is quite an important issue. It will be difficult to improve access to credit unless the public is educated properly.

The project started effectively in January 2005, and will come to an end in December 2006.

[1] INTERPROJECTS GmbH, Frankfurt, Germany, is a member of the consortium carrying out the project

[2] According to the Tor as of 2002

[3] ToR, op.cit.

3. Mortgage lending opportunities[4]

In analyzing the mortgage lending opportunities, the Project used the model outlined in chart 1, the individual components of which will be explained in the following:

Chart 1. Factors affecting mortgage lending opportunities

We will briefly summarize the current situation:

3.1 Key macroeconomic factors[5]

With a population of 47 million inhabitants, the situation is as follows:

- GDP growth is expected to decelerate to 2.2% in 2006 against the background of a sharp rise in imported gas prices.
- In 2007 the real GDP growth is forecast to be 3.7%.
- Key driving force of GDP growth remains final households' consumption both in 2006 and 2007.
- Investment activity remained sluggish in the beginning of 2006 but is expected to intensify later in the year. In 2007 investments are expected to restore a high growth pace.
- Growth rate of imports is expected to continue to surpass export growth.
- Consumer inflation is forecasted to stay at around 12% in the next two years.

3.2 Legal framework

From a Ukrainian creditor's perspective there are major obstacles to an expansion into mortgage lending:

1)
An appropriate real estate register is not in place.

Registration of real property rights allows a creditor to assess the ownership as well as to ascertain any third party's rights to the property. The current registers are not centralized and are not publicly available. The consequence for a potential creditor is that the above information can not be verified.

2)
Enforcement of rights in mortgage collateral is complicated and lengthy (foreclosure)

The court proceeding and execution procedures are highly uncertain and time and cost consuming. In practice legal enforcement may last from six months up to a few years. It may cost up to 30% of a debt value for numerous fees, legal expenses, etc.

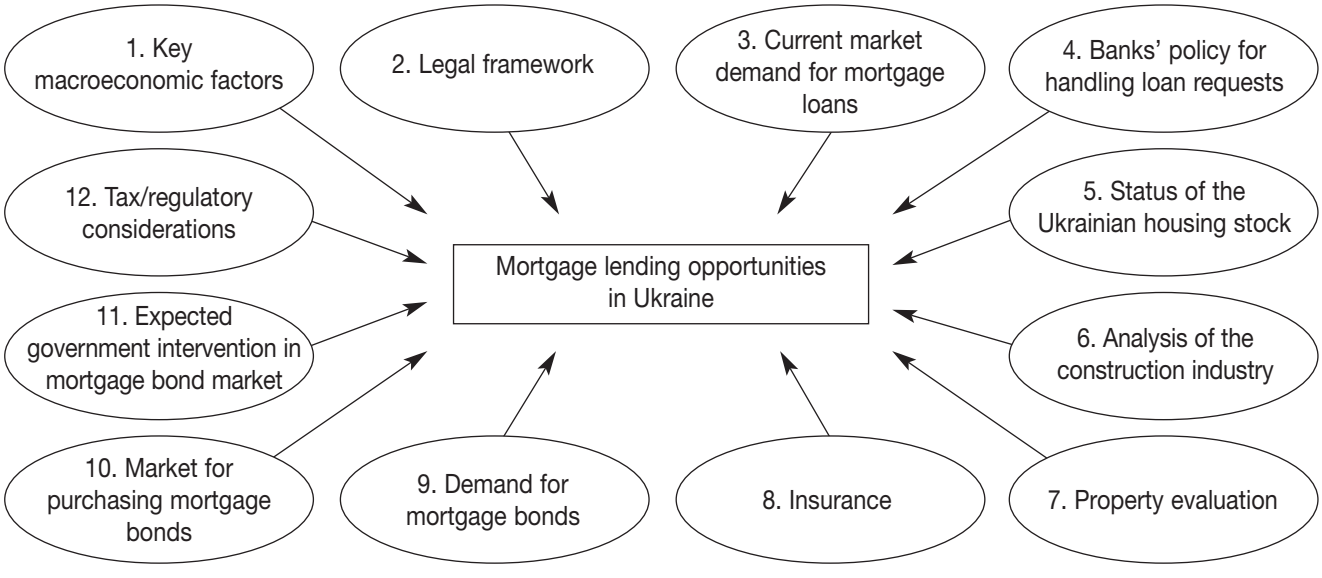
With respect to enforced auction, the only body which is authorized to operate such auctions is "Ukrspetsjust" which is a subsidiary of the Ministry of Justice. The consequence of this highly monopolized situation is that prices are significantly below the market.

Finally, eviction procedures do not work in practice.

3)
Lack of consistency between the Law on Mortgage and other laws.

There are number of conflicts between Law on Mortgage and other laws. In addition various ambiguities, discrepancies and irregularities exist in definitions. All in all this can lead to malpractices, market disruptions and losses to creditors.

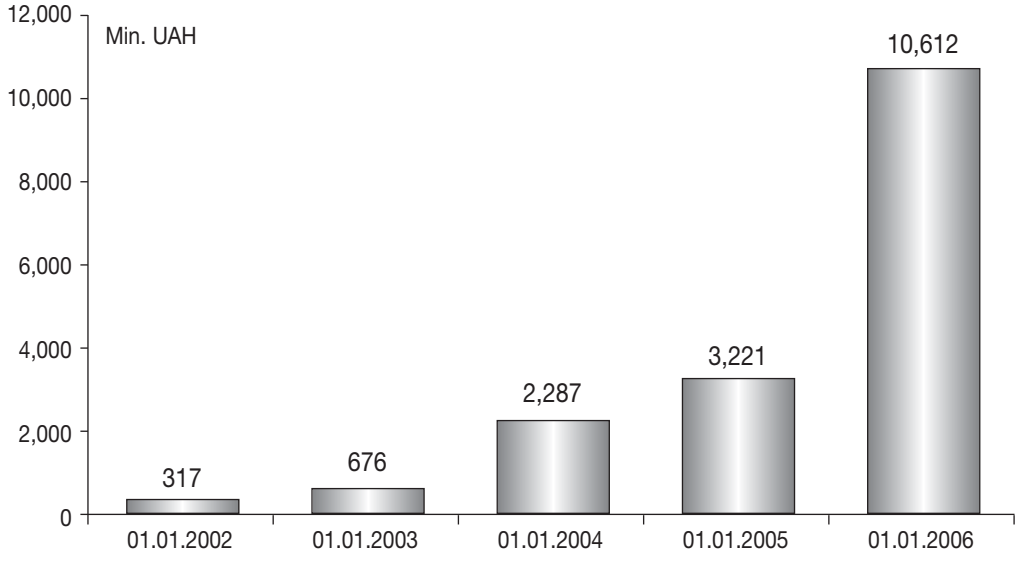
Chart 1. Factors affecting mortgage lending opportunities



[4] EU Project: "Establishment of Mortgage Market Rules and Legislation – Ukraine": Working Paper No 1: Strengthening The Ukrainian Mortgage Structure" (Authors: Leif Andersen, Olena Prokopovych, Anton Sergeev)

[5] Institute for Economic Research and Policy Consulting: "Macroeconomic Forecast Ukraine", No. 1 May 2006.

Chart 2: Outstanding debt under mortgage loans, 2002-2005, UAH million[6]



Currently the government is considering changes to legislation to improve the legal framework for mortgage lending, for instance in setting up a unified registration system of real estate.

3.3 Current market demand for mortgage loans

As chart 2 illustrates, mortgage lending has increased considerably over the last few years, and particularly from 2005 to 2006. The growth was even higher in the second half of the year than in the first half, which is noticeable as the economy generally slowed down. The share of mortgage lending grew from one percent of GDP to 2.5 per cent during 2005. The importance of mortgage lending for the banks is also illustrated by the fact that the portion of mortgage loans in the overall lending portfolio grew from 3.6 percent at the beginning of 2005 to 7.4 percent at year end. By the end of 2005, 82.7 percent of the mortgage portfolio was denominated in hard currencies, mainly USD but also EUR, thus only 17.3 percent were UAH-denominated loans.

The leading banks in driving this growth are Ukrsotsbank, UkrSibbank, Aval Bank, Privatbank, Raiffeisenbank, Finance & Credit Bank, Nadra Bank and Pravex Bank. A number of these banks are fully or partly owned by Western European banks.

3.4 Banks' policy for handling loan requests[7]

Distribution channels:

Obviously the traditional branch network is used as a distribution channel. However, some banks used only their regional branches or special dedicated branches for processing the loans whereas the smaller branches and outlets were mainly used as points of sale. Some banks had established or were in the process of establishing so called "Mortgage Centers" where all service providers needed for mortgage clients are located in the same building, e.g. the banks, insurance companies, notary, and real estate agents. Some banks used real estate agents, construction companies (primary market) and to a lesser extent insurance companies as distribution channels. One bank processed 90% of its underwriting based on real estate agents as distribution channel.

Loan products:

Several banks did not finance construction projects. However, all financed new residential property as well as property related to the secondary market. In fact all legal loan purposes including refurbishments and acquisition of consumer goods are eligible for finance as long as adequate collateral is in place and the customer's credit worthiness is deemed acceptable. In other words, it is entirely the value of collateral and the financial standing of the borrower to which the bank refers in its approval decision. According to UNIA, a large number of loans are taken by existing owners of flats with the purpose of buying a new flat, and these are usually paid to the construction company even before the building activities have started.

[6] Ukrainian National Mortgage Association: "Ukrainian Housing Mortgage Market – Analytical review for 2005"7 Source: The Project's interview of twelve banks during February-March 2005 and UNIA's research conducted in early January 2006.6 Ukrainian National Mortgage Association: "Ukrainian Housing Mortgage Market – Analytical review for 2005"

[7] Source: The Project's interview of twelve banks during February-March 2005 and UNIA's research conducted in early January 2006.

Another quite common loan purpose is to borrow in order to buy a small flat for a family's children which they can use while they study.

The terms and conditions obviously vary from bank to bank. Loans are offered in UAH as well as in USD, and also in Euro. However, finance in USD is by far the most common, and the Euro is rarely used. Loan repayment is usually monthly based on the annuity principle, and interest is usually fixed throughout the life time of the loan. The loan durations vary from 1-30 years depending on loan purpose and the bank's internal policy, however prepayment is frequent, and it is not uncommon that a 10-20 year loan is paid within 3-5 years. The median interest rate was 16-17 percent on UAH denominated loans, 12.5-13 percent on USD denominated loans, and 11.5-12.5 percent on EUR denominated loans as of beginning of 2006 . The interest rate has generally been lowered over the last years due to a more fierce competition. From beginning of 2005 to 2006, the interest rate was reduced between 2.5-4 percent dependent on currency and the banks. In addition to the interest, many banks charge a monthly fee, between 0.1-0.2 percent of either principal or outstanding balance. Such a fee de facto increases the effective interest paid by the borrower. Many banks do not have maximum loan amounts, however, the typical loan size, depending on the location and whether the real estate relates to the primary or secondary market, varies between USD 10 – 80 thousand. Average loan sizes in Kiev and other major cities are considerably higher. The loan to value percentage is between 70-85 percent. Some banks may extend loans without a down payment against additional collateral.

Loan origination procedures:

The main procedures followed are almost the same for all banks: Based on the loan application, which include data on income, fixed costs, family size, net assets, etc. the maximum loan size is calculated. Usually the monthly payment on loans should not exceed 40 – 80% of disposable income (documented income after tax and all fixed costs). In some banks the "security service" is tracing the potential borrowers' previous willingness and ability to pay by using a microfinance credit methodology .

Hereafter the potential borrower identifies a property which he wants to buy and the property is valued either by an independent appraiser or an appraiser employed by the bank . The client and the property are usually then assessed through a manual scoring system, and if the client is eligible for a loan, a loan and mortgage agreement is signed, and at the same time the borrower takes out an insurance policy. Hereafter, the loan will be disbursed after the down payment has been paid.

In all cases, property insurance needs to be taken out, and some banks require in addition legal title insurance, and insurance against the insured death or loss of work ability.

3.5 Status of the Ukrainian housing stock

Ukraine started its residential privatization in 1993, allowing the current tenants to transfer the occupied residential housing stock into their private ownership. Currently, around 85% of the total residential housing stock is in private ownership, which is quite high compared with the average in Western Europe (especially Germany).

As of beginning of 2006 the housing stock was approximately 19.08 million with an average of 22 sqm living space per person. Almost one third of the population resides in housing of unsatisfactory quality. A third of the population lives in conditions where there are less than 14 sqm per person. Of living space, almost 70 percent of the housing stock is more than 35 years old, and 20 percent of 4-person families live in 2-room apartments[12]. Despite yearly increases in construction since 2000, the level of new residential construction, at some 8,000 units, is still only 37 percent of what it was at its peak in 1987. The pricing development of the secondary housing apartment market per sqm in Kiev for 2005 in USD[13] is shown in chart 3 opposite:

As illustrated, the prices increased approximately 50 percent depending on apartment size. A similar trend can be noted in the primary housing market, with approximately 35-40 percent increases. The same trend exists in fast growing cities such as Dnipropetrovsk, Kharkiv, Donetsk, Lviv, Odessa, Sevastopol and Yalta whereas cities in more remote areas as Rivne, Ternopil, Vinnytsia, Sumy, Zhytomyr, and Chernigiv encountered increases between 20 and 25 percent. The prices of residential property per sqm exceed those of for instance Warsaw and Budapest.

The key driver of house prices in Ukraine seems to be developer margins, not construction costs. In recent years, the latter have risen only slightly faster than consumer prices. Developer margins in urban areas in Ukraine are considered to start from 100 percent upward – with the Kiev average in the range of 500-700 percent. For Kiev, one interviewed lender for example suggested typical construction costs of 300 USD per sqm in contrast to sales prices of 1000 USD per sqm. These

[8] Ukrainian National Mortgage Association, op. cit.

[9] For instance by interviewing persons with a knowledge of the potential borrower' s willingness to pay.

[10] Sometimes the property is selected by the client prior to the customer application.

[12] According to Mr. Yuri Blaschuk, chairman of the board of International Mortgage Bank

[13] Ukrainian National Mortgage Association, op. cit. 2005

[14] The Project's Working Paper No 2: "Consumer Protection Issues in Mortgage Lending in Ukraine: Case, Scope and Implementation Strategy for Regulation". Authors: Hans-Joachim Dubel and Gennadiy Shemshuchenko (draft).

numbers are extremely high in regional comparison – for example in perspective of typical margins of approximately 35 percent in neighbouring Romania[14].

3.6 Role of the construction industry

The Ukrainian construction industry is proving to be a highly lucrative business sector, with the soaring demand for all types of real estate and increasing property prices. Around 80% of the activity on the market is new construction, renovation being the secondary factor.

Unfortunately this sector of the economy is not transparent. The growing construction markets of major urban areas are divided between the companies with close links to city administrations. These links distort the market and significantly reduce competition among construction companies. Furthermore, the imperfect land allocation system allows construction companies to obtain valuable construction sites in long-term lease in exchange for promises of future investments into their development (which might never crystallize). The land sale tenders are virtually non-existent. These factors allow for the rise of corruption and growing dissatisfaction of the urban population with the construction practices.

3.7 Property evaluation

Property evaluation procedures in Ukraine are well regulated. All of the rules correspond to International Evaluation Standards and to EU Standards of Real Estate Evaluation.

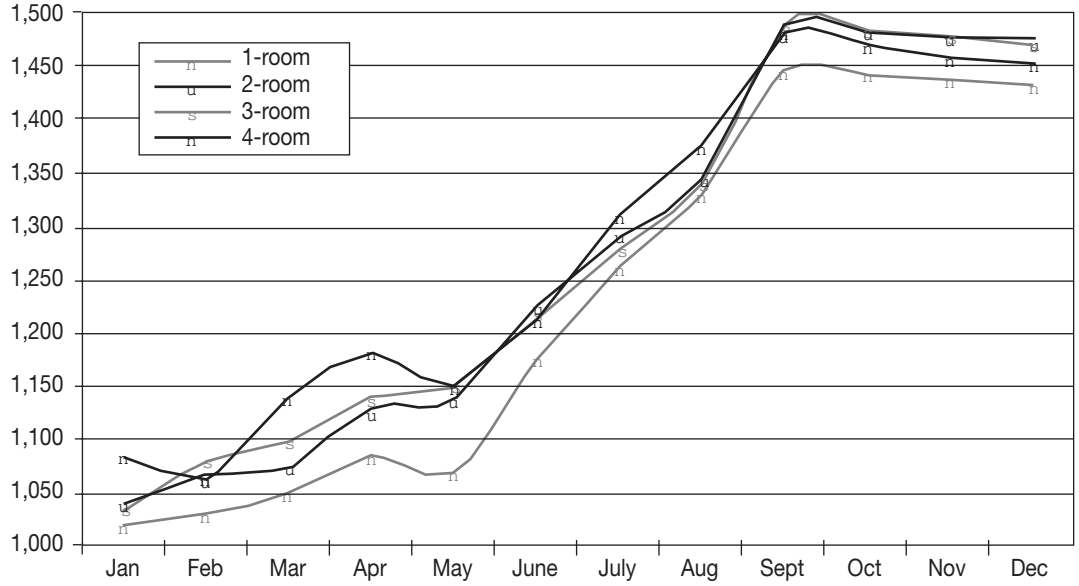
All of the physical or legal entities conducting evaluation are required to be certified. The certification requirements are standardized and correspond to the EU guidelines. There is strong competition on the Ukrainian real estate evaluation market. Property evaluators are largely independent. Many of them are members of the Ukrainian Real Estate Evaluation (Realtor) Association as well as its regional branches.

3.8 Insurance

The Ukrainian insurance industry is still relatively small and undeveloped, however developing dynamically.

The practices of insuring risks of banks are very rare due to the overall low sophistication of the Ukrainian financial sector. However, this situation is likely to change in the near future. Currently, the banks are interested to insure their consumer lending risks. Since most of the banks are using some type of collateral, which is usually the item purchased by the client, they are interested that their clients insure the collateral. Present National Bank regulations unfortunately do not stimulate wide usage of insurance as the key instrument of banking sector risk

Chart 3 – Price development in the secondary housing apartment market in Kiev, 2005 (in USD)



[14] The Project's Working Paper No 2: "Consumer Protection Issues in Mortgage Lending in Ukraine: Case, Scope and Implementation Strategy for Regulation". Authors: Hans-Joachim Dubel and Gennadiy Shemshuchenko (draft).

management. A number of banks have their subsidiary insurance companies through which they insure all their risks.

In mortgage loan transactions, banks usually require their clients to have the following types of insurance[15]:

- real estate property insurance
- legal title to the real estate property insurance, and
- Accident insurance and in some instances insurance against death of the borrower

3.9 Demand for mortgage bonds

The experience from other countries clearly suggests that the main buyers of mortgage bonds are investment funds, pension funds, insurance companies, banks, corporate investors and private individuals. In some countries, foreign investors are market players as well.

The insurance industry as previously mentioned is in a very early stage of development as described in the previous section and the Ukrainian economy is under-insured[16]. In this respect, it is important to note that the insurance sector is expanding rapidly albeit from a small base. The Law on Insurance was adopted by the parliament in 2001[17]. The insurance companies mostly invest in deposits, foreign currency, and real estate. However, they may in future invest in bonds, corporate and government as well as mortgage bonds. There are examples that insurance companies have invested in corporate bonds, however, not on a regular basis.

According to Benfield's study[18], the economic upturn in the last years has brought into existence a definable and growing middle class with money to spend on luxury goods. The spending power of this small group of the population is increasing. It has stimulated markets in property and consumer goods and created demand for insurances and consumer credit. Income has increased significantly and is also expected to do so in the future as other economic and structural reforms take place, however at a slower pace.

As regards pension funds, the key legislation was passed in 2003. The scheme consists of three pillars and the third pillar scheme is under the Law on Non-State Pensions which came into effect at the beginning of 2004. The law permits three types of schemes, one of which is funds run by the financial services industry such as banks and insurance companies[19]. In June 2004, the first four non-state pension funds were registered, and they include two banks, Aval Bank and VA Bank[20]. According to the chairman of the State Commission for Regulation of Financial Services Markets in Ukraine, 23 non-state pension funds were registered as of 01.04.2005. The chairman further mentioned that there is a huge interest in establishment of non-state pension funds and that almost all banks either have already applied or are preparing documents for registration.

There have not been any private individuals who have invested in corporate bonds. Foreign investors are not in the market yet.

Regarding *investment* funds, the law "On Collective Investment Institutions"[21] was put into force in 2001, and establishes comprehensive rules for setting up, operating and liquidating investment funds and asset management companies in Ukraine. In addition it provides substantial tax incentives for portfolio investment through the funds. According to the information from the "Ukrainian Association of Investment Business", 105 investment funds and 88 assets management companies were active in Ukraine as of 01.01.2005. The funds available are primarily invested into shares of companies with substantial assets primarily in real estate, and less than 1 percent in corporate bonds.

Based on the above, it is not likely that mortgage bonds will be a major object for investments in the future, if the prospect for increasing real estate prices remains unchanged, as the alternative investment opportunities will be deemed more lucrative.

3.10 Market for purchasing mortgage bonds

The only experience with issuing papers similar to mortgage bonds in Ukraine is a specialised bank based on a special "experimental" law that directly applies to one bank. A market is not yet in place, since mortgage bonds are not issued. The bond market encompasses the trading of corporate bonds which is the largest part of the bond market covering a variety of industries including banking. Although the non-government bond market is growing, it is still relatively small compared to the loan portfolio of commercial banks, and amounts to less than 3 percent of the total loan portfolio of the commercial banks.

Government bonds are the second largest part of the bond market after corporate bonds. The market is very imperfect with limited monthly turnover. 2003 was the year for the re-launching of municipal bonds offering by the city of Kyiv after municipal

[15] According to Raiffeisenbank Ukraine.

[16] "Insurance Market in Ukraine", Institute For Economic Research and Policy Consulting, March 2004.

[17] The following is based on: "Ukraine Debt Market Assessment", May 2003, Deloitte Touche Tohmatsu.

[18] "Ukraine Insurance Market Review", June 2003.

[19] "Pension Reform in Ukraine", May 2004.

[20] "Pension Reform in Ukraine", June 2004.

[21] Under "collective investment institutions" are meant the investment vehicles with varying levels of risk for investing in the stock, bond or money markets. The Ukrainian legislation foresees the establishment of venture funds, corporate and unit funds.

bond issuance faded away in the late 1990s when the city of Odessa defaulted on its bonds.

3.11 Expected government intervention in the mortgage bond market

The Government has created a financial institution, called the State Mortgage Institution (SMI), which should refinance residential mortgage loans. Institutions such as the SMI are usually referred to as "liquidity facilities", and describe the service they offer, ie providing liquidity to lenders based on refinancing long-term mortgages. Liquidity facilities primarily serve a role of a supplementary funder, being tapped on an as-needed basis by lenders who usually acquire the bulk of their funding from shorter-term sources, primarily bank deposits. The funding allows the lender to extend the average term of the funding, but not to eliminate all funding risks. The SMI will thus make loans to qualified mortgage lenders based on qualified mortgage collateral, and use the issuance of corporate bonds as its primary mode of raising funds. The loans would primarily be for a period of 3 to 5 years, although shorter periods could be made available, as could longer periods, if the bond market in Ukraine begins to support issuance of bonds for longer terms.

Although the SMI was established early 2005 it is hardly functioning, and has become a political football. It is the authors' assessment that due to political considerations it may never fully function.

3.12 Tax and regulatory considerations

The Cabinet of Ministers of the Ukraine has approved a resolution in which it is mentioned "To ensure implementation…., it is necessary to enhance tax legislation envisioning introduction of tax deductions for revenues received as interest or yield on investments into mortgage securities issued by residents of Ukraine".

4. Approach to intervention

The project's Terms of Reference was the most important guiding document in the planning of the technical assistance. However, for various reasons since the ToR was finalized after two years had elapsed, and in the meantime a number of other donors were already active in delivering technical assistance. A key objective of our project was obviously to avoid duplicating other donors' interventions, and we therefore undertook a number of initiatives to coordinate activities with all major donors. It was agreed that our Project should concentrate on further development of the primary market as a sound primary market is a prerequisite for a well functioning secondary market. Another major donor would focus on the secondary market. This decision was also based on the fact that the other donor's intervention has a duration of five years which is often a minimum requirement for secondary market development. Furthermore, as several other donors were highly involved in improving the regulatory and legal environment for all major aspects of mortgage lending the resources for this component were reallocated to other project components for the purpose of a higher benefit to the country.

An important input to our final project design was also interviews of the 12 most important mortgage market players, covering 75 percent of the mortgage portfolio at that time. One of the purposes of the interviews was to get the "clients'" opinion on their needs and requirements.

In relation to strengthening of the primary market development some of the priority areas are risk management, training of mortgage credit officers, support to product development and alternative distribution channels, dissemination of other countries' mortgage market structure aiming at providing inspiration for the further development and design of the Ukrainian mortgage structure, and consumer protection. In order to fulfill those wishes, study tours to three countries were also organized.

Another key aspect of our project design and approach is related to make the programme as tailor-made as possible to the Ukrainian environment. Ukraine is unique as far as culture, economic and legal environment, etc are concerned, and all solutions suggested should be tailor made. Obviously inspiration from other countries is important but should be used as a "tool box", not pure duplication. In order to pursue this working approach we decided to select two pilot banks for capacitating of the banking sector in risk management and development of new mortgage products and distribution channels. In working with banks directly, and subsequently posting the deliverables, such as manuals, workshop presentations, forms, etc. on UNIA's website and thus making them available for all major mortgage providers, we are able to ensure that our results are not only academically correct but also adapted to the Ukrainian banking environment.

In fine tuning the program, the Project was well aware of the need to establish synergy between the various deliverables and components. Here are some examples:

1. As mentioned above, risk management and product and distribution channels development were deemed important by the banks. Consequently, we ensured that those topics were well covered in the study tours to the three countries the Project visited with senior Ukrainian bankers;

2. We invited some senior bankers involved in our "train-the-trainer" program as trainers, cf. below, to the study tours so that they in turn could provide the trainees with experience from other countries;

3. For the study tours, we invited two journalists to participate so that they in turn could disseminate important issues through the press regarding "best practice" of our Project;

4. Our deliverables for the pilot bank in risk management relating to credit scoring methodology were incorporated in the training of mortgage credit risk officers;

5. We initiated a Code of Conduct aiming at introducing consumer protection to the Ukrainian mortgage environment. At

the same time we included the topic in our training of mortgage credit officers.

6. A working paper is being issued on consumer protection in order to further broaden the knowledge of the Code of Conduct and the applicability for banks as well as for the consumers.

Last but not least, in all our interventions we are whenever possible channelling those through UNIA in order to increase the sustainability of the organisation. An increase in the services offered by UNIA quantitatively as well as qualitatively channelled through UNIA has so far led to an increase in the number of members as well as a general lift in membership fees.

5. Examples of intervention

The project consists of a number of areas of intervention and deliverables which can not all be described in a relatively short article. The authors have therefore decided to select three main areas, and describe these in some detail. The selected areas are training of mortgage credit officers, a risk management pilot project, and market information on the mortgage lending system.

5.1 Training of mortgage credit officers

Introduction

During our interviews with 12 banks, it became obvious that one of the key constraints to further outreach of mortgage lending was the lack of trained mortgage credit officers. In order to substantiate the needs, our Project in liaison with UNIA conducted a survey among banks, insurance companies, and various state institutions related to the mortgage market development. The outcome was that the total needs exceeded 3,600 professional staff.

Obviously we could not train such a huge number directly, and we decided to launch a "train-the-trainers" program whereby 80 high calibre staff were taken through a six day training course, and enabled to train 2,000 employees. The aim was to establish a "turn-key" training, so that the final trainees would be able to perform their tasks in the banks in the areas of loan origination, monitoring and delinquency management. Exceptions were obviously training in the banks' internal procedures and IT systems. Also from a sustainability perspective, it makes sense to train selected staff of banks and other institutions so that they in turn can transfer knowledge to employees of their own institutions.

Needless to say, high quality training is always essential but in this case very critical. If sub-standard training was provided to 2,000 employees it may have a detrimental effect on the whole mortgage lending environment. The project took therefore a very conservative approach (as outlined below) to the training development.

The training had two major components, obviously the mortgage lending but also in training methodologies for adults as learners. Many of the selected trainers were quite strong in retail lending but inexperienced in training and others were bank trainers without retail credit experience. The third group, the non-bankers, was generally without either of the two skill sets. The "art" in the design and in conducting training was therefore to take into account the lack of homogeneity of the group. Fortunately this "blend" of professionals with different backgrounds turned out to be ideal, as interesting discussions facilitated our aim of having a high degree of interactive training.

Preparation of the training and the training materials

The programme in mortgage lending necessitates careful planning and high involvement of stakeholders to ensure commitment and sustainability. Therefore, right at the outset of the planning we initiated a "training committee" consisting of senior representatives from the sector to be trained, and from the Project. The members encompassed representatives from a number of larger and smaller providers of mortgage loans. This was deemed necessary to ensure that the training needs were fully understood and that all Ukrainian specific issues were taken into consideration in the design of the training. In addition the committee also helped to create commitment and ownership. The purpose was that the committee should sign off on all major deliverables, i.e. the training curriculum and all training materials, which finally exceed 800 pages.

Two days were dedicated to training methodologies, the first day where theory was presented, and on the sixth day where the attendees performed their own training based on what was achieved during the whole training session.
In addition to the sections on trainer/adult training, the mortgage lending methodologies consisted of the following components:

1. Elements and stages of the mortgage lending process;
2. Basic mortgage lending risks;
3. Mortgage instruments;
4. Regulatory and legal aspects;
5. Legal aspects of mortgage origination and delinquency management;
6. Prequalification assessment of borrowers;
7. Underwriting procedures, including scorecards, financial calculations of mortgage loans, assessment of borrowers' debt capacity;
8. Insurance issues;
9. Housing market dynamics;
10. Methodological approach to property appraisal;
11. Housing construction issues;
12. Business game;
13. Loan monitoring and delinquency management; and
14. Consumer protection.

In addition to the above off-site training, the attendees participated in a one day on-site training with an appraiser or realtor, and accompanied the appraiser in visiting and appraising selected residential objects. The completion of the on-site training was the

responsibility of the participating financial institutions.

The training material should ideally be designed by the same persons who are subsequently going to execute the training. The Project identified twelve local experts, each of them with a deep knowledge of the topics they were supposed to cover. In doing so, it became clear that most of them had no or limited experience in performing training and designing first class training materials, for the latter including business games, case studies, exercises, etc. Therefore, all short term experts went through a training course covering training methodologies as well as design of training materials. Afterwards they were tested to ensure that minimum requirements were in place.

The development of the training materials proved, as expected, to be a complicated process with up 9-10 drafts before final version was reached. The Project had announced high standards for the material with no room for compromise.

When the Project had assessed that the material could be accepted, it was then reviewed by an experienced mortgage banker for consistency and for compliance with the Ukrainian financial and regulatory environment as well as for consistency with "best banking practise" in Ukraine.

Apart from hard copies of the training material, soft copies were provided as well. In addition, all training sessions were recorded on a DVD so that the trainers can use the media as preparation for their own training sessions.

5.2 Risk management pilot project

As mentioned above, the purpose of the pilot project was not only to assist the selected bank but in addition to disseminate the results and experience gained from the programme through adding them to UNIA's web-site so that all member banks would have access to the information.

Seven banks were short listed for the pilot project based on pre-determined criteria[22], the banks were asked to fill in a risk management questionnaire, and based on the response to the questionnaire and subsequent interviews, the pilot bank was selected. The deliverables from the pilot project will thus be beneficial for the many banks which are currently preparing to enter into this business line.

After signing a memorandum of understanding to protect the confidentiality of the bank while allowing broad dissemination of the main deliverables, a risk management due diligence was performed, and a working group on mortgage business development was established. The main purpose of the working group is to increase the efficiency of the pilot project. The bank's representatives are key professionals from different departments related to retail business development, such as IT, legal, sales, security, methodology, risk management and client service department. From the Project, the risk management consultants participate.

It is worthwhile mentioning that the Project deemed it very important to have the right "blend" between international and local consultants in place in order to enhance the sustainability of the pilot project. Risk management staff is a scarce resource in Ukraine, and the Project therefore decided to recruit young, talented staff with a strong willingness to learn, with an attitude of delivering high quality deliverables, and either with a mortgage background or an engineering background. They were, and still are, being intensively trained by the international consultants.

The concrete deliverables, discussed and agreed with the bank are listed below. Some of the deliverables are in place; others are still in progress as the consultants will continue to work until mid December 2006.

Main deliverables are:

1. *Risk management organization recommendations.* It needs to be very clear which departments are responsible for which tasks. Our pilot bank is quite conservative with the risk management function more influential than the business lines. This may be quite sensible in a very volatile environment; however, sound and profitable business should not be prevented. We see it as an important task to build bridge between the risk management function and the business lines so that sound business can be generated in accordance with the bank's risk appetite.

2. *Scoring systems*. Based on the bank's current profile and strategy, we are providing recommendations on best practices in scoring systems and in their implementation. We are developing a manual for scoring model application, which includes scoring card adjustment procedures, implementation plan and resource allocation. Finally, we will train personnel including local experts.

3. *Operational risks.* Operational risk is quite high in Ukrainian banks in general. We are providing the bank with specific recommendations on human resource development in mortgage lending; especially people risk (fraud) and possible mitigation measures. Further, we are delivering a general guide covering operational policy on mortgage lending including all operational risks (people, process, system, external), and closely linked hereto, we are delivering a loan administration/monitoring manual covering operational risks. As a part of the deliverables, training sessions and workshops are integrated. We will qualify and quantify risks for a specific organizational unit within the bank, namely the retail banking credit scoring.

[22] They were: the bank must have implementation of mortgage lending as a strategic goal, have a strong IT department in place, have a solid legal department, and should already have a relative strong risk management system in place. In addition, it should have an interest in working with the Project, and finally there should be no evidence that the bank is currently considered as a privatization candidate.

4. *Asset/liability risks.* The bank is relatively advanced in market risk management, for instance is using Value-at-Risk. However, the nature of mortgage lending, ie long term lending, and in Ukraine primarily in foreign currencies makes it applicable to review the liquidity, interest and foreign exchange risk management vis-à-vis the new business line, and provide appropriate recommendations, for instance in matching assets and liabilities.

5. *Regulatory risks.* We are assessing the risks in mortgage lending vis-à-vis the Ukrainian legal system and NBU regulatory framework, and we will provide recommendations for mitigating these risks.

6. *Insurance in mortgage lending.* We will assess the mortgage property, title, life and accident insurance procedures, and make specific recommendations for improvement and conduct the necessary training.

7. *Mortgage lending IT package.* We will evaluate IT packages, including underwriting module and MIS, and make specific recommendations to assist the bank in preparing specifications to fulfill its IT requirements for mortgage lending. Linked to that we will suggest amendments to existing information technology regulations, including IT security, related to mortgage lending.

5.3 Market information on the mortgage lending system

This component has proven to be very important. Public education is a key issue for dissemination of knowledge of mortgage. It became very clear for the Project at the outset that the public knew very little about mortgage, and public awareness became an important issue as without that, it is difficult to improve access to credit.

The first step was to develop a comprehensive communication strategy, outlining the vision for the Project's public information actions and focusing on the implementation of a number of consistent and well planned actions. Examples of actions implemented based on the communication strategy[23] are listed below.

1. *Agreement with a leading, nationwide, news agency.* The agency is specialized in providing accurate political and business news. The agreement obliges the agency to provide the Project and UNIA with several services, for instance to provide information on all mortgage and real estate related issues, regularly to publish Project/UNIA materials, such as news reports and press-releases.

2. *Press-club meeting.* A cascade national press-club meeting, "Mortgage Lending: Its Role and Importance in Ukraine's Economy" was arranged in Kiev. It attracted more than 60 national and regional media representatives, and involved Members of Parliament, government officials, specialists from the country's leading commercial banks, and real estate organizations. The outcome was extensive coverage of both mortgage developments issues and Project activities. The number of press publications, TV and radio programmes amounted to more than 30 reports. Similar meetings have been held in other cities.

3. *Mortgage workshop for journalists.* The Project has held a 6-hour long 'workshop' entitled 'Mortgage Market Development Coverage in the Media'. The workshop attracted around 50 journalists from 10 regions of Ukraine; several speakers were heads of retail departments from some leading commercial banks. The main goals were to help the participating journalists specialized in writing on economic development issues get rid of some common misconceptions surrounding mortgage market and mortgage lending; have a deeper understanding of how mortgages work, in particular, and why mortgages are significantly important for the national economy development, in general. In addition they had a chance to learn the intricacies of reporting economic news and writing features on mortgage lending and housing market developments.

4. *"UNIA's Tuesday Breakfasts".* To increase the number of UNIA members, the Project has launched a series of breakfast meetings with representatives of senior management of banks. The meetings have been successful as a number of new members signed up, which has improved the sustainability of UNIA.

5. *Booklet: "What is a mortgage?"* The aim is a comprehensive consumer guide, Ukraine's first independent guide to mortgages, available for public distribution nationwide via various channels. A focus-group has been viewed as a significant tool in improving the general value of the guide. The panel's recommendations have been carefully analyzed and where applicable, taken into account. The circulation is planned to be 12,000.

6. *Series of radio programmes.* The series has been planned as a valuable information source and will focus on key mortgage issues, mortgage lending conditions, consumer protection and international cooperation in mortgage market development in Ukraine. These individual radio programmes will be aired on one of the country's leading FM radio stations, as well as on selected radio stations in Ukraine's regions.

7. *Televised episode for national TV.* The televised episode will be produced in the remainder of the Project. It is planned to compare Ukraine's mortgage market developments to the experience of the country's closest neighbours. It will be produced in close cooperation with UNIA's foreign

[23] Defined by the local expert of the Project, Sergiy Grytsenko.

partners in Poland, Slovakia and Germany. The goal is to have episodes that could be aired on the National UT1 TV Channel on a weekly basis, as well as submitted for free airing on TV channels in the regions.

Conclusion

Despite the numerous external and sector-specific challenges, the mortgage market in Ukraine is developing rapidly and attracting considerable international attention, including donor organizations. While this can have a salutary effect, particularly in supporting the growth and further strengthening of the primary and secondary markets, the experience of the project has shown that to continue to channel the growth in a positive direction, a number of aspects should be taken into consideration.

For one, it is important to take a broad approach and support the simultaneous development of the legal and regulatory framework, issues concerning risk, consumer protection and banking sector development, housing, construction and real estate, primary and secondary market players, and the role of government. The better the various interventions can be coordinated, the more impact they will have with the result that the sector growth is promoted in a competent and professional way.

The Project is attaining its particular success in adopting an approach which is both individual and holistic. We are working closely with individual players in the market, adapting and tailoring international norms to Ukrainian requirements and helping to generate a national best practice standard. At the same time, we are targeting broad areas of the Ukrainian mortgage market so that the disparate elements can work together as appropriate and develop simultaneously. We are working to ensure sustainability, both in the institutional support provided to UNIA and in the professional forums created for dialog and exchange on important mortgage issues.

Secondly, particularly in light of the large number of interventions by Donor organizations from countries with different legal, regulatory and banking system configurations, it is essential that recommendations be filtered and sorted to ensure that they are really appropriate for the Ukrainian market. Only in this way can consistency be ensured.

Last but not least, it should be noted that there is a pressing need for further training and information dissemination, both within the general population and among the stakeholders and players in the mortgage market. All training and widely disseminated information materials should be subject to the highest quality control standards and carefully checked for their relevance to the situation in Ukraine.

It can be safely assumed that the Ukrainian mortgage market will continue to grow and develop strongly over the next 5-10 years. A solid foundation for the further development of the market has been laid through the concerted efforts of government, the banks, UNIA and a number of other organizations and institutions. If growth can be managed as it has up to now, then the mortgage sector will be in a position to make a significant contribution to GDP growth of the Ukraine.

List of Acronyms

GDP	Gross Domestic Product
NBU	National Bank of Ukraine
SMI	State Mortgage Institution
ToR	Terms of Reference
UAH	Hryvna, Ukrainian currency (1 USD = 5.05 UAH)
UNIA	The Ukrainian National Mortgage Association

Specifics of Credit Risk Assessment in Mortgage Lending – Sample of Russia[1]

By Victor Mints Ph.D., Independent Consultant, Russia

Introduction

Russia has a short but glorious history of mortgage lending. Mortgage activity in the country started only about six years ago. By the end of 1999, in Russia with a population of about 150 million, less than 500 mortgage loans in the amount of US$11 million were issued. Since then the situation has radically changed. By the end of 2004 the total mortgage portfolio of Russian banks was already equal to 17.8 billion Rubles (about $0.6 billion). During the year 2005, the total volume of mortgage loans outstanding (including securitized loans) increased more than 4 times to 72.2 billion Rubles (about $2.6 billion). It is expected that results of the year 2006 will show an even faster growth rate.

The fast developing mortgage market is attracting more and more participants. Numerous banks and investors are anxious to participate in the mortgage business. As a response to this demand, the secondary mortgage market has emerged and is developing at an extremely high speed. Currently there are at least four specialized secondary mortgage market institutions in Russia. One of them is state-owned (Agency for Housing Mortgage Lending), whereas others (Sovfintreid, KIT-Finance, and BTA – Ipoteca, daughter of BTA Bank of Kazakhstan) are private organizations[2]. All these institutions buy mortgage loans wholesale and sell their debt or securities backed by mortgage loans to investors. Demand for this type of debt and the securities are growing every day.

Why is the Russian mortgage market so attractive for banks and investors? The reason is that mortgage lending in Russia is considered by them to be not only a profitable, but also a risk-free business. The opinion of the Russian business community is that at least one of the major mortgage risks — the risk of borrower's default— does not exist in Russia. This opinion is grounded in the fact that the whole history of mortgage lending in the country does not know even one case of a mortgage borrower's default[3].

The question is whether Russian mortgage loans really bear no default risk due to some unique features of Russian borrowers, or whether the risk exists, but for some reason has not revealed itself yet.

If the risk exists, but for some reason is latent, several questions arise:

1. Why does the risk not reveal itself?
2. Under which circumstances will the risk reveal itself?
3. Could the number of defaults (default rate level) that will take place when the risk reveals itself be approximated for a Russian mortgage portfolio?

It is very important for mortgage portfolio holders to know answers to these questions. It seems the answers could be found by means of analyzing the way mortgage borrowers default risk, (and hence mortgage portfolio consisting of these loans default risk) is managed.

Default risk management

At the stage of loan origination the risk of mortgage borrowers defaulting is managed by mortgage underwriting. Mahoney and Zorn describe mortgage underwriting as the analysis of three groups of factors associated with a mortgage loan. These groups they describe as "the three Cs": collateral, capacity and credit reputation[4]. It is presumed that, by knowing the parameters of these three factors for all loans in a mortgage loan portfolio, an investor can approximate the default rate for that portfolio.

It means that two portfolios with different underwriting parameters should have different level of defaults. It also means that, as soon as a mortgage underwriter starts to apply more rigid requirements to any (or to all) of underwriting factors, the default level of the loans goes down, while relaxing the requirements will increase the future default rate.. Does changing these factors really have such an effect? And, if the answer is

[1] The paper benefited from extremely valuable comments provided by Roger Blood from Mercer Management Consulting.

[2] This is unique for developing countries. In most developing countries a secondary mortgage market does not exist at all. In very few countries where it was created only one secondary mortgage market institution is present. Typically these institutions are state owned and is supported by international donors.

[3] Default is the ultimate end of the loan via foreclosure. Russia knows no foreclosures. There were several cases of borrowers being unable to repay the loans but these cases have been peacefully settled between the borrowers and the lenders.

[4] Cited by M.Lea "Perequisits for a Successful Secondary Mortgage Market: The Role of the Primary Mortgage Market HFI Vol XV/No 2 December 2000.

yes, could it be that Russia for some reason is an exception to the rule?

The collateral factor refers to the ratio between the loan amount and the value of the collateral. In most cases, the property acquired by the borrower is the only collateral for the mortgage loan. This is the reason why collateral factor analysis usually consists of evaluating the loan-to-value ratio (LTV). It has been documented in numerous studies that in developed countries, a strong correlation exists between the LTV ratio of home mortgage loans and the probability of the mortgagor's default. For example, an analysis of loans purchased by Freddie Mac (the Federal Home Loan Mortgage Corporation) between 1985 and 1989 demonstrated that borrowers of loans with LTV of 95-99% were *5 times* more likely to default than the borrowers having loans with LTVs below 80%[5].

If it were the case for Russian mortgage loans as well as for loans from the Freddie Mac portfolio, the relaxing of this collateral factor underwriting requirement (LTV requirement) would increase the default rate of Russian mortgage loans. But the increase did not take place when Russian banks gradually increased the LTV ratios from 70% in 2001 to 90% in 20066. This change has not to this date entailed any default rate growth. So, it appears that this lack of default rate growth demonstrates that Russia's mortgage loan default rate does not correlate with the collateral factor of loan underwriting..

Capacity is a borrower's financial ability to repay the loan. Assessment of capacity is the assessment of whether the borrower's income is enough to make regular mortgage payments, and at the same time, to support the borrower's accustomed way of living. Mortgage underwriters assess this factor in large part by evaluating the borrower's monthly housing payments as a share of total household monthly income. This share is called the "front-end ratio" (or payment to income ratio)

Taking into account the fact that a huge number of households have other debt besides just the mortgage loan, mortgage underwriters usually calculate also the ratio between all monthly debt obligations (such as mortgage loan, car payments, consumer loans, etc.) and monthly household income. This underwriting ratio is called the "back-end ratio" (or overall debt to the same income ratio).

Mortgage underwriters working in developed countries have no doubt that the capacity of the borrower and the probability of default are strongly correlated. For example, the already mentioned analyses of Freddie Mac's portfolio demonstrate that "borrowers with back-end ratio grater than 36% of their incomes were twice as likely to enter foreclosure as those with ratios below 30%".

The experience of Russian banks so far seems to disprove that such correlation exists at all. Four to five years ago, in most banks the requirement was that front-end ratio should be no more than 30%. Since then the requirement has been gradually relaxed, so that a front-end ratio of 50% now is the most common requirement[7]. The softening of the requirement has not influenced the default ratio of Russian mortgage borrowers at all. It means that default rate of Russian mortgage loans has not been influenced by changes in capacity factor just as it has not been influenced by changes in the collateral factor.

Credit reputation refers to the borrower's history of fulfilling his (or her) financial obligations (repaying loans, paying telephone bills, making rental payments, etc). In developed countries this element of underwriting is usually based on data collected and analyzed by credit bureaus. The result of these analyses generally includes a figure ("credit score"), which can be used in the loan underwriting assessment.

A strong link between the credit score of the borrower and the probability of his (or her) default has been shown in countries with well-developed mortgage markets. It would be intriguing to verify whether the link exists in the Russian mortgage market, but unfortunately this cannot yet be done. In Russia, as in most of the emerging economies, credit bureaus do not yet have adequate information on past credit behavior for the majority of potential borrowers. In fact, most mortgage lenders do not assess credit reputation at all. So, unfortunately, we must exclude credit reputation from the factors we can analyze at this time.

In order to answer the question as to why the relationship between default rate and the parameters of mortgage underwriting cannot be seen in Russia, whereas this relationship so clearly exists in other countries, we must analyze the mechanism of that relationship.

Capacity and default rate

The correlation between "capacity" of a borrower and probability of his default is grounded in the fact that each borrower, during the term of the loan, faces several "personal risks". Among them is unemployment, disability, loss of one of the earners of the household, increase in number of dependents, etc. These potential events have the same effect on the borrower's financial ability to repay the loan as disappearance of a part of the borrower's household income. To simplify the context, we shall further refer to all personal risks as one risk – the risk of disappearance of a portion of the household's income.

In case the disappearing share of income is high, the remaining amount may not be enough to support the way of living the

[5] Cited by M.Lea "Perequisits for a Successful Secondary Mortgage Market: The Role of the Primary Mortgage Market HFI Vol XV/No 2 December 2000

[6] With no credit enhancement.

[7] Back-end ratio normally is not assessed in Russia at all since it is impossible yet to get information about other debt of the borrower besides his mortgage loan. One can guess though that a loan with front-end ratio of 50% can easily have back-end ratio of 70%. The ratio is about two times higher than the maximum ratio taken into account by Freddie Mac, which should signal extremely high probability of defaults.

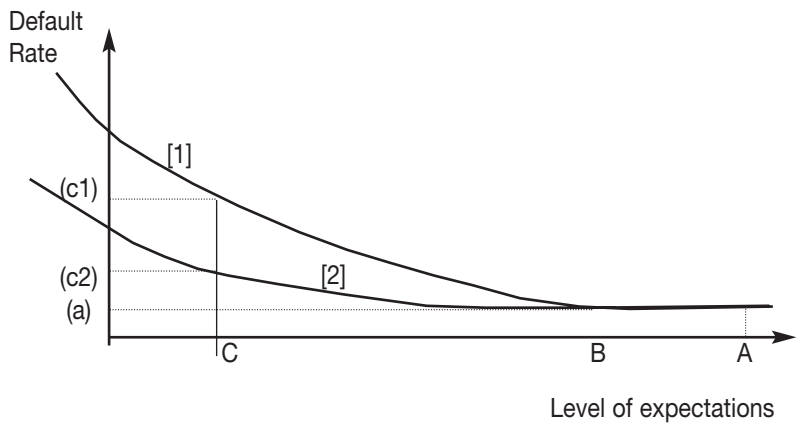
borrower has been used to and also to make the required mortgage payments. What can the borrower do in this case? If he is confident that disappearance of the portion of his income is temporary (optimistic borrower), he will continue to make his loan payments. To do that, he will either tap additional sources of money (use his savings, borrow from his friends or from financial institutions, sell some of his belongings, etc) or temporarily reduce his spending to "bare necessities" (food, clothes, transport, utilities, etc), or he will do both.

If the borrower has reason to believe that the portion of his income has disappeared forever or for a substantial period of time (pessimistic borrower), and if the remaining portion is not enough to support his accustomed style of living, he will not borrow money or reduce spending, but, rather, will start looking for a way to free himself from the obligation to make mortgage payments. One of the ways to do that is to default on the mortgage loan.

In this context we are seeing that the probability of default of the borrower whose income for some reason shrinks depends on two factors: (i) the scale of the reduction: the chances that the reduction of income that takes place will make it burdensome (or even impossible) for the borrower to continue making mortgage loan payments and (ii) income expectations: expectations in connection with the borrower's chances to restore (or even to increase) his income level.

The level of influence of factor (i) on the probability of the borrower's default depends on his payment-to-income ratio[8]. It can be explained in the following way: the smaller is the portion of income the borrower retains after making mortgage payments the more chances are that even small-scale reduction of his income will make it impossible for him to support his living and will force him to default. It means that the higher is the portion of income allocated by the borrower for the monthly loan payment (payment-to-income ratio) the smaller is the reduction of income that may cause default of the borrower ie the higher is the extent to which factor (i) influences the default rate. It can be concluded that the higher the payment-to-income ratio is, the stronger is the influence of factor (i) on probability of default.

Figure 1



[1] – Loans with high payment-to-income ratio.
[2] – Loans with low payment-to-income ratio

At the same time, the influence of the scale of reduction of income (factor i) can be reduced or increased by the income expectations (factor ii). The higher the income expectations level is, the bigger the reduction of income will be necessary to force a borrower to default, because a borrower with a high level of income expectations will easily find the money necessary to compensate for a temporary reduction of income. It means that the higher the income expectation level for the borrower is, the lower is the probability of his default.

If income expectations for the borrower are high because he (or she) is an educated, energetic, young, and friendly person, it is nearly impossible that he will not find a way to borrow money and avoid defaulting on a mortgage loan, even if the scale of reduction is very big. It can be stated that if the income expectations level for particular borrowers are extremely high, the level of default may be independent of the payment-to-income ratio of the borrowers.

The relationship between income expectations (changes in unemployment level and in real wages), payment-to-income ratio and default rate may be demonstrated by the curves shown in figure 1. It can be seen that the default level in general is higher for the borrowers with high payment-to-income ratio than for the borrowers with a low ratio. At the same time, in parallel with the growth of the level of expectation, the default rate becomes less and less dependent upon the ratio. At the extreme, the default rate may become completely independent of the payment-to-income ratio.

Income expectations may be high, not only for well-educated young professionals but for a much wider segment of the workforce. In some cases, income expectations may turn out to be high for practically everybody. A high level of income expectation for everybody is generally associated with the periods of rapid economic growth. During such periods, numerous new jobs are

[8] The smaller is the scale (the size) of the reduction of income that may cause the default the stronger is the influence of factor (i).

Table 1. Income expectations parameters in Russia

	1998	1999	2000	2001	2002	2003	2004	2005
Unemployment rate	13.2	12.6	9.8	8.9	8.6	8.0	7.8	7.7
Average monthly wages (Rubles)	1,052	1,523	2,223	3,240	4,360	5,499	6,739	8,530
Ruble/Dollar exchange rate	20.65	27	28.16	30.14	31.78	29.45	27.75	28.78
Average monthly wages ($)	50.9	56.4	78.9	107.5	137.2	186.7	242.8	296.4

created and, hence, the unemployment rate is falling, while real wages are increasing[9]. During such periods, mortgage loan underwriters might decide to permit a high payment-to-income ratio for all borrowers, because practically all of them would be able to avoid default in case of a temporary loss of a portion of their income.

It seems that this relationship is a key factor in explaining why the default rate of Russian mortgage loans is not influenced by the "capacity factor" of these loans. Throughout the last eight years, the Russian economy has experienced extremely fast growth. As a result of the growth, the unemployment level has been falling by approximately 9% every year (See Table 1). Average monthly wages increased during the same period by more than eight times in Ruble terms and nearly six times in US Dollar terms.

In this situation, income expectations for all the borrowers have been extremely high. This means that all Russian mortgage loans are currently at the point A of Figure 1. At this point the default level for both curves is the same (point a), ie, mortgage loan portfolios with different payment-to-income ratios have the same (extremely low) default rate.

It is clear, though, that the risk has not disappeared. If the situation starts to change (eg, the unemployment level stops decreasing and real wages stop increasing) the Russian mortgage market will start moving along the curve through the points B, C, etc. Starting from the B-level of income expectations, the risk will gradually begin to reveal itself.

Is it important that the risk will reveal itself in different ways for loans with different payment-to-income ratios (the default level will become different for the two curves, as it is at point C). For the loans with high payment-to-income ratios, the default rate equals c1, while for the loans with low payment-to-income ratios, the default rate level will be much lower and will be equal to c2 .

Collateral and the default rate

The relationship between collateral value and probability of default is well documented but the nature of this relationship is not clear. The fact that this relationship exists means that if two borrowers with the same income and the same amount of monthly loan payments lose the same portion of their income, the one having more expensive property (lower LTV with the same loan) is less likely to default than the owner of the cheaper property. This cannot be explained by differences in borrowers' ability to repay the loan. The ability of the borrower to repay the loan is the same.

The only explanation may be that it is not the ability but the willingness of the borrowers to repay the loans that differs in the case. The difference in "willingness level" may be explained in the following way: In case the borrower faces the situation that he (or she) for some reason has no financial means to continue making mortgage payments (for example if he has lost his job and cannot borrow money), the borrower has two options:

- Option A. He can sell the house and repay the loan.
- Option B. He can default on the loan.

In order to choose the most appropriate option, the borrower assesses how his decision will influence his current financial status and his future status. The major factors he evaluates in connection with both options are presented in table 2.

The borrower that decides to default on the loan has strong advantages. He can live in the mortgaged house and pay neither mortgage payments nor rent till he is evicted[10]. Normally he would have several months until actual eviction takes place[11].

At the same time, the defaulting borrower ruins his credit reputation and loses an opportunity to keep in his possession the difference between current market price of the house and mortgage debt outstanding (value difference)[12]. After the home of the defaulted borrower is sold (in most cases below the market price), the lender withholds not only the amount of

[9] In reality expectations are a more complex matter than just a function of economic growth rate. In some cases they may be high because of recent political changes in spite of current difficulties or may be low due to the memory of recent crises in spite of positive trends in the economy.

[10] The amount of rental payments the borrower would be supposed to pay if he sells his mortgaged home during the period of time equal to foreclosure period – we will call Rentals Accumulated. Rentals Accumulated equals to market rent price multiplied by foreclosure period. Foreclosure period is the period between the day the borrower stopped making mortgage payments and the day of eviction.

[11] In numerous countries foreclosure takes several years or turns out to be impossible.

[12] We are considering that down payment was paid by the borrower's own money (borrowers equity) and hence the whole Value difference is kept by the borrower.

Table 2

Factors	Option A (Sell the property and repay the loan)	Option B (Default on the loan).
The difference between current market price of the house and mortgage debt outstanding (Value difference).	Kept by the borrower (if the funds for the down-payment were not borrowed by the borrower).	To great extent is withheld by the lender in the form of compensation for foreclosure expenses, interest unpaid through the foreclosure period, penalties, etc.
Credit history of the borrower.	Remains unscathed.	Is ruined.
Home expenses.	High. Must start paying rent.	Negligible. Pays neither rent nor mortgage loan repayment.

outstanding debt but also foreclosure expenses, interest unpaid through the foreclosure period, penalties, etc. It means that in most cases where the borrower that has selected Option B and defaulted, he or she receives nothing or close to nothing when the house is resold.

It can be stated that, depending upon what option is selected, the borrower loses either his credit reputation and rentals accumulated or the value difference. It means that, selecting one of the options, the borrower must compare these three factors and decide what makes better sense for him to lose. In order to compare he must somehow assess the value of each of the factors.

It is not easy to predict what value a borrower will attribute to credit reputation (loss thereof). Credit reputation may be extremely valuable for a young family and may not be as valuable for a middle-aged person who has no intention and little chance to find a new job and to apply for a new mortgage loan. It is rather easy, though, to predict how the borrower will assess and compare rentals accumulated and value difference because both are expressed in monetary terms.

Of course, no borrower compares the value difference and rentals accumulated using a calculator, but nevertheless, some kind of calculation goes through his mind. The question he must answer to himself comparing the values is: "If I sell the house and repay the loan will I receive enough cash to provide my family with a rental home for a substantial period of time?" If the answer is: "Definitely not!" the chances that the borrower will decide to default are rather high.

Value difference is directly related to current LTV. Current LTV is the LTV at the moment the borrower losses the ability to repay the loan.[13] It is clear that the higher Current LTV is (and hence the lower value difference is), the greater is the chance that the borrower will decide to default.

The break-even point is reached when the value difference becomes equal to the rentals accumulated. If the Current LTV makes the value difference higher than the rentals accumulated, the borrower will probably decide to sell the property and repay the loan. It does not mean that the borrower will inevitably do it. The borrower's behavior is not always rational. Some of them may not sell the house and resettle due to psychological factors such as unwillingness to move or indecision, but the probability that default will not take place is very high in the case.

On the contrary if the current LTV makes the value difference lower than the rentals accumulated, the borrower will have a strong inclination to default. Whether he does it or not will depend on how much he values his credit reputation.

For example, if the rental cost per year were to be approximately 20% of the price of the house, and if the average default period were equal to one year, the break-even point for current LTV would equal 80%. This means that it is not rational for the borrower to default on the loan if current LTV is lower than 80%. On the contrary, if the current LTV is higher than 80%, the probability of the borrowers defaulting is high[14]. It may be said that the key factor defining probability of default is the LTV at the moment the borrower loses his ability to repay the loan (current LTV).

Current LTV is different from the LTV at the moment of underwriting (original LTV). Throughout the life of the loan, LTV is constantly changing due to two factors. The first factor is change (typically reduction) of mortgage amount outstanding; and second, changes in the market value of the mortgaged house[15].

If self-amortizing mortgages are used (the most common type of mortgage loan), the debt outstanding amount is constantly reducing through the life of the loan. The amount of monthly reduction increases each month through the whole life of the loan. It is clear that "old loans" tend to have lower current LTVs than "young loans". Since the mortgage business has started in

[13] Value difference can be calculated as Market price of the house multiplied by (100% - LTV).

[14] We are not taking into account taxation, transaction costs and several other expenses.

[15] We will not take into account amortization though if rapidly deteriorating construction materials are used, amortization should be taken into account

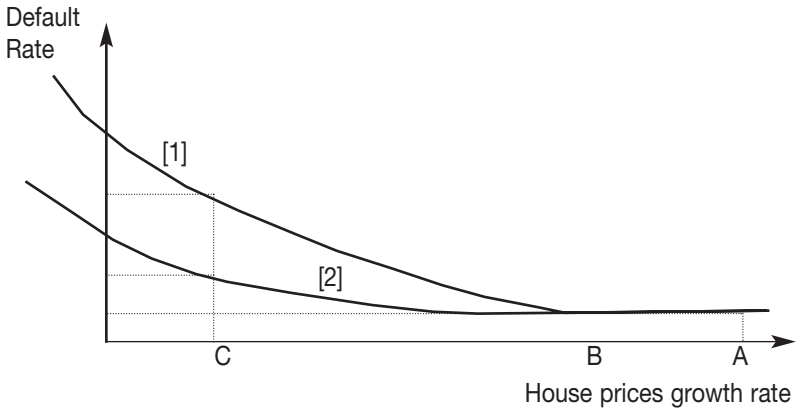
Russia only recently, the total mortgage portfolio in the country consists of loans of comparatively young age. Due to the young ages of the loans, their current LTVs should be comparatively high, which could signal a rather high level of future defaults. Since the default level to date is low, it seems clear that in Russia (as well as in several other countries with real estate booms), the current LTV level is being driven mostly by home price growth.

The nature of this influence is the following: If the housing market goes up, the value of mortgaged property is increasing and, therefore, current LTV is reducing[16]. The higher is the increase in housing prices, the faster current LTV is reducing and, hence, the faster value difference is growing. This means that the faster the increase in housing prices is, the faster current LTV reaches a break-even point, and the faster it becomes unreasonable (and hence improbable) for the borrower to default on the mortgage loan instead of selling the property and repaying the loan.

From the above, we are seeing that the probability of default is strongly driven by the speed with which house price growth pushes current LTV to the level below the break-even point[17].

In the case of extremely fast home price growth, the loans issued with high original LTV (above break-even-point level) may turn out to become loans with low current LTV (below break-even-point) in a very short period of time. This period may be much shorter, even, than a typical foreclosure period. In this situation, for the borrowers on loans with original LTVs above the break-even-point, default can become as improbable as for the borrowers on loans with original LTVs below the break-even-point.

Figure 2



[1] – Loans with high LTV.
[2] – Loans with low LTV

This means that, if real estate prices are growing at an extremely high speed, the probability of default can decrease to the point where it becomes effectively independent of the original LTV and hence independent of the collateral factor of mortgage underwriting.

The correlation between home price growth and the default rate for mortgage loans with different LTVs is demonstrated in Figure 2.

The recent situation in Russia may be used to illustrate this point. At present, Russia is experiencing a great real estate boom. Changes in average home price per square meter in Moscow are presented on table 3. It is easy to see that in less than a year and a half, home prices in Moscow increased more than 1.5 times (from $1800 per square meter to $3050 per square mater). On average, home prices have increased by 3.5% every month.

As it is demonstrated in table 4 this rate of home price growth only in three months after loan issuance turns the loan with original LTV of 90%, into the loan with current LTV below 80%, and in a bit more than half a year the LTV of the loan becomes close to 70%![18]

If we consider that in Russia the break-even point for the current LTV is equal to 80%, we can conclude that all loans with original LTVs below 90% reach break-even level in less than four months[19]. This means that even the borrowers who received loans with LTVs of 90% and started experiencing

Table 3. House prices in Moscow

Date	Jan 2005	Jul 2005	Jan 2006	April 2006
Price per square meter	$1,800	$1,900	$2,300	$3,050

[16] Decline in market prices influences current LTV in right the opposite way.

[17] Of course, the break-even point is also not fixed but is gradually changing in parallel with renal price changes. The break-even point may also be changed if new legislation reducing or increasing average foreclosure period is applied.

[18] Calculations were conducted based on the following presumptions: loan term – 20 years, interest rate – 12%.

[19] Loans with the original LTV equal (and lower than) 80 % are at break-even point already at the moment of issuance

Table 4. Changes of Current LTV (Sample of 1 square meter house bought on January 2005).

Month from the issue date		1	2	3	4	5	6	7	8	9	10	11	12
Market home price ($)	1,800	1,860	1,923	1,987	2,054	2,122	2,194	2,267	2,343	2,422	2,503	2,587	2,673
Mortgage debt outstanding ($)	1,620	1,618	1,617	1,615	1,613	1,612	1,610	1,608	1,606	1,605	1,603	1,601	1,599
Current LTV	90%	87%	84%	81%	79%	76%	73%	71%	69%	66%	64%	62%	60%

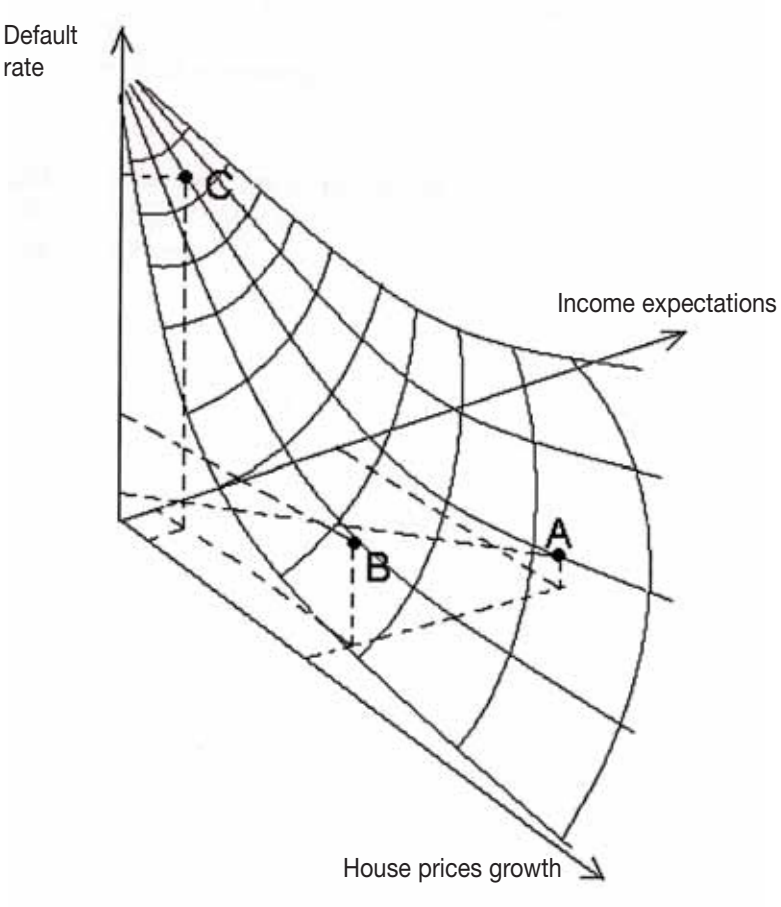
difficulties with mortgage payments very soon after receiving the loans will have no inclination to default on the loans.

The Russian housing and mortgage market currently is at the point A in Figure 2. At this point, the default level for the both curves is the same, ie, it is not related to the original LTV. It is clear, though, that if the situation starts to change (real estate price growth slows down or even declines), the Russian mortgage market will move to the point B and later to the point C. At this point, the default level will be different for the two curves. The loans with original LTVs above 90% will not reach break-even-point for a substantial period of time, while loans with LTVs below 80% will be already below that point. This means that the probability of defaults for loans with original LTVs above 90% will be much higher than for loans with original LTVs below 80%.

Conclusion

It is clear that the currently low rate of mortgage defaults in Russia is explained not by the unique nature of Russian borrowers, but by variety of other factors among which such macroeconomic parameters as income expectations and house prices growth rate seems to be of major importance[20].

Figure 3



[20] Among other factors are: owner-occupation of practically all mortgaged property; high educational level of the borrowers (several heads of underwriting departments interviewed by the author have not been able to remember even one mortgage borrower to be a manual worker), etc.

The relation between default rate and these two parameters may be visualized with the help of Figure 3. (The Figure has only one curve, while actually it should have an unlimited number of curves each associated with a particular LTV and a particular payment-to-income ratio).

Figure 3 can help to find answers to the questions posed at the beginning of this paper. The default risk does not reveal itself because currently Russia is at the point A of Figure 3 where both income expectations and house prices growth rate are at extremely high levels. This level of the parameters makes default rate very low for all mortgage loans, whatever the original LTV and payment-to-income ratio of these loans may be.

The default risk will start to reveal itself when one of these parameters - or both of them - starts to go down. In parallel with these changes, the probability of default will start to rise.

For example, as shown in Figure 3, if income expectations go down, while house prices growth remains unchanged, the system will move to the point B and level of default will increase from a-level to b-level. If both income expectations and house prices growth rate go down the system will move to the point C where the level of default will increase to the much higher c-level.

If therefore mortgage lenders and investors take into account (based upon analysis of macroeconomic indicators) future trends in income expectations and real estate prices, they would be able to better predict the future default rate of their portfolios.

The most important conclusion that can be made, based on analysis of the specifics of the current Russian market, is that mortgage portfolio holders in Russia, as well as in other countries, should not rely on information about the current default rate of their portfolios when assessing the future behavior of the portfolio. Instead, portfolio holders should take into account trends of macroeconomic changes and calculate future default rates associated with these expected changes.

The lack of understanding of the fact that the default rate level is not a fixed parameter of the portfolio, but rather a dynamically changing parameter (influenced by macroeconomic environment) may cause a serious under-valuation of the risk.

The consequences of under- valuation of any housing finance risks (including risk of default) may prove to be extremely dangerous, not only for mortgage portfolio holders but also for the economy as a whole It must be stressed (though it is not the subject of the paper) that not only the risk of borrower's default but several other important mortgage risks (cash-flow risk, currency risk, agency risk, etc.) are neglected by most mortgage lenders and investors in Russia which aggravates the situation considerably.

Kyrgyzstan's "Squatter Communities" and the Potential of Housing Micro Finance to Support Upgrading[1]

By Raymond J. Struyk, Chief of Party of the Egypt Financial Services Project[2]
Friedemann Roy, Senior Project Manager, Bankakadamie International

In recent years Kyrgyzstan's economy has shown solid growth after the very difficult years following Russia's 1998 financial crisis. This solid record was broken in 2005 as a result of the March "Tulip Revolution." As shown in Table 1, growth is expected to return in 2006 but this will depend on continued political stability.

Despite the generally good growth during 2000-2004, the country remains poor, with a per capita GDP of only about $400 in 2004; in 2000, 52 percent of the population lived below the poverty line.[3] The Kyrgyz Republic remains substantially rural in character with 65 percent of its 5.1 million population still living in the countryside. In 2003, agriculture and forestry accounted for 52 percent of employment.[4]

The shuttering of plants and the disappearance of other work opportunities during the transition in smaller cities and in the countryside produced a major wave of migration to Bishkek (the capital) and, to a lesser extent, Osh. These migrants created new "marginal rings" or novostroika, ie, occupancy of completely unserviced sites, around the destination cities. Around Bishkek, some 42 communities have been established, with a total population of about 250,000.

This article focuses on these new areas and the role that market rate housing finance can play in improving living conditions in them. We argue that this is a prime opportunity for housing micro finance to play a significant role. Such lending has begun but could be sharply expanded.

The Novostroika and Government Policies

Beginning in 1989, even before the collapse of the Soviet Union, these settlements were created by occupancy of completely unserviced land. Locally, such actions are called "invasions." But the term is something of a misnomer. The current reality is that households wanting a land plot in a new area (have to) apply to the government of the municipal raion (district) where the land sought is located. This procedure was created to accommodate those wanting to move to the major cities but without the means to purchase or rent a dwelling. Qualifying for a plot is demanding. Among the requirements in principle is that the household demonstrate that it has had at least one employed member for three

Table 1. Macro-economic Indicators, 2000-2005

Indicator	2000	2001	2002	2003	2004	2005	2006a
GDP growth rate (%)	5.4	5.3	0	7.0	7.1	-0.6	5.0
Inflation rate (%)	18.7	6.9	2.1	3.1	2.8	4.9	5.7

a. Projected

Source: IMF.

[1] This article is based on work for the project, Pre-Feasibility Study for Housing Finance in the Kyrgyz Republic, done for KfW under contract in 2006. Positions expressed are those of the authors and not necessarily those of KfW, the Urban Institute or Bankakadamie International

[2] The project is being executed for USAID by Chemonics International. When Mr. Struyk worked on this article, he was a Senior Fellow at the Urban Institute in Washington DC

[3] World Bank web site, Kyrgyz Republic Data Profile, as of January 2006.

[4] Economic Intelligence Unit, *Country Profile 2005: Kyrgyz Republic*, p.40.

years, someone is currently employed, and the household does not own a dwelling in the city. The raions have prepared the layouts of the novostroika areas and allocated the plots to those on the approved waiting list. Land rights come with the allocation, which the household can then register quite inexpensively.

The land allocated by the raions has all been publicly owned. In Bishkek, land, mostly from collective farms, has been transferred to municipality by a series of Government Resolutions. No private land has been taken. When households have claimed private plots, municipal officials have required them to give it up. In 2006 the Government decided that it would not allocate additional land to the municipality and that further novostroika around Bishkek would be in the Chui Oblast.

The plans developed by the raions have generally been enforced. Road rights-of-way are generous and residential lot sizes large—500 to 600 sq.m. is typical. Hence, these are low-density areas in contrast to the extremely high-density jumbled invaded areas of Asia and Latin America. The settlements' locations differ sharply in their quality, with some being in areas subject to frequently flooding or other hazards.

The municipality has responsibility for providing infrastructure services, including roads, water, electricity, schools, and poly-clinics. Since 1996 these investments have been partially financed by the Republic budget. In 2005, the agency responsible (OGUKS) had a budget of Som 162 million of which Som 104 million came from the Republican budget.

In oldest novostroika areas roads have been paved, electricity provided, schools built, and water pipes laid, although water-borne sanitation is not present. But the municipality is constrained by low budget resources and areas already 5-6 years old have only electricity installed. Transportation everywhere is provided by private vans that operate on municipally approved routes. In short, the municipality has the responsibility for providing these services but is able to finance only a small part of the needed investment.

Some squatters brought doors, windows, and other elements from their former units to use in constructing new units that begin really as shacks. Generally, the development of dwellings units has followed the classic model of incremental construction. Initially, a small unit is often constructed of mud bricks and a roof of durable materials. It is then improved and expanded over time. In the oldest novostroika areas most dwellings are now constructed of durable materials, although a large proportion are not fully completed.

Experience in developing countries has fully demonstrated the complexity of defining and implementing a successful approach to upgrading squatter areas or marginal housing rings. Only a few countries have succeeded in organizing initial land occupancy by the "invaders" so that it is orderly, thereby greatly facilitating the eventual provision of basic infrastructure.[5] In this context, Kyrgyzstan's record is impressive.

Housing Finance[6]

After independence in 1991, a two-tier banking system was implemented in Kyrgyzstan. Supervision is executed by the National Bank of Kyrgyzstan (NBKR). As shown by the figures in Table 2, the banking systems in the countries in the so-called CIS-7 region are quite underdeveloped overall, even compared with the Baltics and Central Eastern Europe; and Kyrgyzstan fits this pattern.

There are 19 commercial banks and 319 credit unions operating throughout the country. In addition, there are 103 micro credit institutions, with Finca and Bai Tushum being the largest operating in urban areas.[10] They offer a mixture of crop, livestock, agro-processing, trade and

Table 2. Indicators of Financial Debt in Selected Countries, 2002[7]

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

[5] For a good discussion of the components of a comprehensive upgrading program, see L. Antolihao and B. van Horen, "Building Institutional Capacity for the Upgrading of Barangay Commonwealth in Metro Manila," Housing Studies, vol. 20, no.6, 2005, pp. 873-96. Indonesia is an example of a country where informal land development has been regularized. See Chapter 4 in R. Struyk, M. Hoffman, and H. Katsura, The Market for Shelter in Indonesia Cities (Washington, DC: Urban Institute Press, 1990).

[6] In places this section draws upon, IFC, "Kyrgyzstan Housing Finance Gap Analysis," draft February 27, 2006, which will be one part of a larger report on mortgage lending in Central Asia.

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

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

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

[10] See International Business Council, "Priority Recommendations to Improve the Kyrgyz Business Environment," summer 2005.

3. Home Purchase Mortgage Product Examples at the End of 2005

	Minimum down payment (%)	Annual interest rate ($)	Annual interest rate (Som)	Term (years)	Prepayment penalties?
Energobank	30	20	20	5	Yes
Kyrgyz Credit	50	24	24	3	No
Halyk Bank KYG	40	16	16	7	Yes
Demir Kyrgyz Int'l Bank	30	20	N/A	3	Yes
InexímBank	30	20	24	5	No
Bai Tushuma	40	N/A	24	5	Yes

a. Micro finance company

Source: IFC report, op. cit., with authors' additions.

mortgage loan products aimed primarily at the micro and SME markets. Combined lending amounted to $19 mln. at the end of 2005.[11] The Kyrgyz Agricultural Finance Corporation (KAFC) also belongs to this group, which has been extending micro loans to farmers with World Bank financing.[12]

The banking system has experienced substantial growth in the past two years. Commercial banks' assets almost doubled over 2003-2005. Importantly, deposits from individuals rose by 86 percent over the same period. Despite the banks' growth, competition has not been sufficient to narrow sharply the spread between loan and deposit rates. They stand at 12-14 percentage points, in part because limited lending opportunities means that banks' costs are being amortized over a relatively small base.

In the context of banks' high liquidity, the demand for mortgage loans over the past years has been readily embraced by lenders. Mortgage lending increased sharply since 2002 when it really began, reaching Som 540 million ($13 million) in outstanding loans at the end of 2005. Year-on-year growth in outstanding loan balances was: 2002-2003, 372 percent; 2003-2004, 230 percent; and 2004-2005, 90 percent. At the end of 2005, mortgage loans accounted for 2.4 percent of bank assets and 7.0 percent of outstanding loans.[13] These figures give the upper limit to the development of mortgage lending for home purchase and improvements because the National Bank does not collect separate information on residential loans. But even including loans for other purposes secured by property, compared even to the countries of Eastern Europe, mortgage volume is very small. For example, the stock of mortgage loans is the equivalent of 0.4 percent of GDP in Kyrgyzstan, compared with 5 percent for the Czech Republic and Poland.

By March 2006, 17 of 19 commercial banks with full banking licenses were originating mortgages. Some non bank financial institutions are also originating mortgages for significantly lower loan amounts. One example is the Bai Tushum micro finance company, where home purchase mortgages in Bishkek average about $10,000 and home improvement loans about $5,000. A few of the country's 300+ credit unions have recently begun making mortgage loans.

Mortgage products. As shown in Table 3, interest rates are high and lending terms short. Average loan amounts are about $15,000 according to the IFC, although there appears to be considerable variation among banks.[14] Many lenders impose prepayment penalties, but these seem mostly to apply only to the first year or two of the loan term. Maximum payment-to-income ratios are hard to define because the presence of substantial income that goes underreported or unreported to avoid taxes. Trying to determine true borrower income is a major challenge to loan underwriting. Banks interviewed reported using very high standards for the maximum share of monthly income for the mortgage payment as a percentage of net income (PTI), ie, 50 percent and even higher. Loans are fixed rate, self-amortizing. Most banks require property insurance but life insurance is viewed as excessively expensive. It is common practice to charge a 1 percent origination fee.

Under these conditions, only a small share of Kyrgyz households is able to take a mortgage loan for home purchase. The affordability problem associated with the short loan term and high interest rates is

[11] See Demir Kyrgyz International Bank, Annual Report 2004, page 5.

[12] It will remain a non-bank institution until its privatisation which is expected to be completed by end-2006. See IMF, "Kyrgyz Republic: First Review under the three year Arrangement under the Poverty Reduction and Growth Facility – Staff Report", November 2004, page 15.

[13] Data provided by the National Bank of the Kyrgyz Republic.

[14] One bank with whom the team met stated an average mortgage loan amount of $30,000 to $35,000.

[15] The high charges create strong incentives for collusion between the buyer and seller to understate the sales price.

worsened by the extremely high tax on property sales (5 percent).[15]
All banks and the Non Bank Financial Institutions interviewed stated that they made home improvement loans as well and in all cases these are also secured by a mortgage on the property. Lending terms vary. At some banks the loan term (up to 5 years) and interest rate are the same as for home purchase loans. But at others the loan term is a short as one year, and both interest rates and loan origination fees are higher.16

Risks in mortgage lending. The two major risks associated with mortgage lending are credit and interest rate risk. Liquidity risk is also a problem with long-term loans reducing the ability of banks to generate cash quickly should it be needed. On the other hand, exchange rate risk associated with dollar denominated loans is manageable as 73 percent of deposits in commercial banks were in foreign currency at the end of 2005.[17]

Credit risk. There are four significant sources of credit risk.

- At least at some lenders' underwriting practices and elements of loan servicing are not well-developed, with an absence of clearly defined procedures and staff training. There are presently no publicly offered training courses for mortgage loan officers or on housing finance topics in general.18

- The process for registering the mortgage is not only cumbersome but also entails risk because there is a several day period between the recordation of the sale, and probably the payment of the seller by the bank, and the recordation of the mortgage lien. Worth noting is that amendments to the Law on Registration were passed in January 2006 that permit private persons to access full records on individual properties, something that was not previously possible. Actual registration fees are low.

- The foreclosure process contains a good deal of uncertainty in principle. This arises from the ability of the borrower-in-default to exercise the option of having the bank's claim adjudicated in court at any time, even when an out-of-court settlement is near completion. It is also possible for the borrower-in-default to drag out the court process for as long as two years. Finally, proceeds obtained by the back from in-court settlements are subject to taxation, which can be as high as 16 percent. Clear eviction regulations and procedures are absent.

- Property appraisals are done by bank staff who do not have specialized training in appraisal, putting lenders at risk of inflated value estimates.[19]

Most banks interviewed cited few problems in practice with registration and foreclosure. They are, however, pressing for amendments to the Law on Mortgage that would make the process more certain and efficient. [20] Moreover, the EBRD representative and some bankers indicated that they saw the foreclosure process as quite uncertain with respect to timeliness.
A credit bureau (Credit Information Bureau—Trust) was established two years ago as a for-profit entity. It provides reports on juridical and physical persons. Presently about seven banks contribute data and get credit reports. Others complain of the high fees associated with membership and individual credit reports.

Interest rate risk. Banks are often making 5-7 year loans funded by short-term deposits. As long as mortgages and other long-term loans accounted for only a few percentage points of a bank's assets, the risk is clearly manageable. But if mortgages begin to account for a greater share of assets, they will represent a significant risk in the event that the cost of liabilities rises significantly. Banks have no way to hedge this risk.

Expanding Housing Finance in the Novostroika

The widespread availability of loans for dwelling upgrading would accelerate consolidation of homes in the novostroika. The probable welfare gains from improving living conditions appear to be large. Families' expenses for heating would very likely fall, leaving them with greater disposable income. In addition, positive health effects—a reduction in work days missed among the majority of those employed that have marginal jobs without any sick leave provisions—would also add to directly to household incomes.

In early 2006, at least three lenders, two commercial banks and one micro finance agency, were already extending loans for dwelling upgrading or purchase to households living in Bishkek's novostroika. All three built this lending on their experience in extending SME and micro loans. Interest rates are comparable or somewhat higher than for other residential borrowers. Loans are mortgage loans, in part because registration is inexpensive and title search on these new properties very straightforward. The question is how to expand the lending volume.

The answer is to apply an adjusted version of the classic housing micro finance (HMF),

[16] For example, at one lender the terms for a home purchase mortgage are 5 year loan term, with a 20 percent interest rate and a 1 percent origination fee; for a home improvement loan the term is 1 year, the interest rate 27 percent and there is a 3 percent origination fee.

[17] Data from the NBKR web site. 97 percent of new deposits were in foreign currency, reflecting the political uncertainty in the country.

[18] A Bank Training Center has recently been founded that is associated with the National Bank. The team was unable to meet with the director.

[19] This is according to the Association of Kyrgyz Appraisers. It is worth noting that thanks to a donor-financed technical assistance program, the Association offers a range of courses on appraising various types of property using international standard methods. The Association certifies qualified members; certificates are signed as well by four government agencies. There are no licenses. The Association reported that generally bank staff are not interested in this type of training. It appears that prior donor SME finance programs, for example, have not required banks to use certified appraisers.

[20] In late February when the team was in Bishkek amendments to the Law on Mortgage were being considered by the parliament that would strengthen banks' position in the process.

as described by Bruce Ferguson based primarily on Latin American experience.[21] As he notes there are HMF products that are "linked," ie, they determine the borrower's creditworthiness on the basis of an already-developed credit history through prior SME loans, and "stand-alone" products. Many Kyrgyz lenders are skilled in underwriting SME loans and some in micro loans, and they are employing these practices in determining creditworthiness for housing improvement loans in the novostroika. But this still limits significantly the number of qualifying borrowers.

The second, "stand-alone," product is a way to improve outreach and to increase the number of borrowers. It combines the loan component with a simple savings scheme that serves as a pre-screening instrument to select future reliable borrowers. According to experiences of contract savings schemes in European countries, customers with a savings contract prior to the loan disbursement have shown lower default rates than customers without a pre-savings contract.[22] Note, however, that this product needs to be offered only to those clients whose creditworthiness cannot otherwise be determined. Typically, such a scheme would be unnecessary for those clients who have already received a loan from the lender.

The main elements for this product are shown in Table 4. The underlying idea that a savings effort would lead to a loan promised for after successful completion of the savings contract. Both the savings and the loan periods would be aligned to the individual participant's capability to set aside a certain amount of money every month. For example, a customer who would be able to save $50 per month could save within 2 years $1,200 plus accrued interest. Consequently, he would be entitled to loan amount of $1,200 that would result in an amount of $2,400 to be available for financing a modernization or upgrading measure. (The monthly payment on a 3-year , 24 percent loan of this amount is about $47.)

The length of the savings period could be individually negotiated but should be not shorter than one year, as the client might be able to borrow from friends and relatives to top up his own monthly savings for a several month period. Savings should earn market interest rates to maintain a positive savings incentive. Customers who might cancel the savings contract prior to completion would be assessed a penalty.

To enhance the attractiveness of the product, the bank might consider offering a longer repayment term or a rebate from the current market loan interest rate (eg 200 basis points in the Kyrgyz context). Such measure would be justified in view of the lower credit risk associated with them.
Since only few financial institutions have been active in the *novostroika* areas, most of the people may have very limited access to financial services. In Kyrgyzstan overall a small share of households have bank accounts.[23] Thus, an extensive marketing campaign may be required to reach potential borrowers and to raise their confidence in dealing with formal financial institutions. One possibility for the latter could be the distribution of leaflets in the mini vans that link the novostroika to Bishkek center.

A Wider Market?

Although the *novostroika* are rare in the transitional economies of Southeastern Europe and the Commonwealth of Independent States (CIS) with Albania (Tirana) being the only other country known to the authors to have a significant problem of this type, there is a major opportunity for housing micro finance in region. In a number of these countries, households in rural areas in particular often occupy very basic housing. For example, in Kyrgyzstan 83 percent of households in rural area lack running water in their units and 96 percent do not have flush toilets; in Albania's rural areas 74 percent of dwellings have no indoor toilet and 54 percent lack indoor running water; among dwellings in rural Romania, 89 percent lack indoor running water, 95 percent are heated with solid fuel, and 45 percent are officially rated as "slums."[24] With governments in the region retreating from responsibility for housing generally, issues about stimulation of household upgrading of the basic units they occupy come to the fore.

The foregoing points to a very large market for micro housing finance in the region—one that to date has received very little attention from lenders or from the international donor community. It is only a short-step from micro lending generally to micro housing finance, and there is abundant donor support for SME and micro lending programs present in the region. This combination of the stark need for housing improvements and the ability of private lenders to meet it with very modest mentoring argues for including micro housing finance in these programs.

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[21] "Scaling up Housing Micro Finance: A Guide to Practice," Housing Finance International, September 2004, pp. 3-13.

[22] The combined default ratio of the whole Bausparkassen industry in Germany was 0.04 % of the total loan portfolio (data per September 2004). In Slovakia this ratio amounted to 0.56 % (as per end 2003). Source: Association of Private Bausparkassen. Loan performance on micro finance loans is also reported to be good; see the essays in F. Daphnis and B. Ferguson, Housing Microfinance: A Guide to Practice (Bloomfield, CN: Kumarian Press, 2004).

[23] " A 2004 World Bank report stated that only 4 percent of the population held bank accounts.

[24] Sources: for Kyrgyzstan, Institute for Urban Economics, op.cit; for Albania, Economic Commission for Europe, Country Profiles on the Housing Sector: Albania, (Geneva: ECE, 2002); for Romania, Economic Commission for Europe, Country Profiles on the Housing Sector: Romania, (Geneva: ECE, 2001).

Table 4. Suggested features of an optional savings scheme within the home loan improvement program for novostroika areas

Feature	Comment
Contract amount in savings period	Defined amount (eg, $3,000) linked to individual savings effort per month in relation to duration of savings contract
Contract savings term	eg, 1-3 years
Interest rate on savings	Current market rates for at least one-year deposits
Payment of savings installments	Monthly
Loan promise	Depends on savings contract, ie, loan amount should be same as the value of the savings contract
Allocation of loan	On completion of the contracted savings term
Redemption of loan	In equal monthly installments; annuity mortgage
Loan interest rate	Market rate possibly adjusted for strong credit rating of borrower
Security	Up to $1,000 the bank may not want to ask for property as collateral

Housing Finance and Regional Integration - Former Yugoslav Case: Could it Work?

By Aleksandar Radulovic, Secretary General
Association of Brokers of Montenegro

Introduction

The transition from a centrally-planned to a market-oriented economy has entailed different financial dilemmas in the countries of the former Yugoslavia[1], and housing finance is one of them. The change of the political system and the wars are among the reasons for recession and the collapse of the housing market (Pichler - Milanovich, 2001). During this time, housing policy was not a political priority (Tsenkova, 2003).

Today, these countries are characterised by high home ownership rates due to a privatisation wave of state owned property. However, housing finance is still progressing at a slow pace in most of the countries which still reflects the poor legal conditions and the lack of long-term funds. Besides the demand for modernisation and renovation of the existing housing stock, there is also a considerable need for new housing which is partly the result of an on-going migration from rural to urban areas in search of employment.

These changes require the creation of a sustainable model for funding home construction that is based on domestic sources, regional cooperation and foreign investors. The introduction of housing programmes will mitigate some of the basic problems that are a threat to the region, such as demographic problems and social stratification, which may produce long-term negative effects for the whole region and the European integration process, if they are not solved in a proper way.

Foreign direct investment, generally, does not flow from economically developed to less developed countries, but rather to other countries at a similar level of development (Ribnikar, 2001). EU integration has entailed or revived existing or new connections in this region, especially during the last five years. In all of these countries, a number of foreign banks (mainly from Austria and Italy) have been present with a wide range of new products and long-term credit lines. In some countries there are foreign credit lines and special housing and saving funds to support housing finance activities.

Over the last few years mortgage and housing loans have become one of the most important and most dynamic business fields in an increasing number of former Yugoslav countries. High growth rates on mortgage loans in relation to GDP are the main characteristics of these markets. However, these ratios are still below 10% (except Croatia) which is lower than the EU-15 average (34% in 2005).

Macroeconomic stability could support the development of housing finance. However, the creation of working housing finance mechanisms in countries in transition requires reforms of the legal framework and the introduction of new financial institutions and financial sources which will be in the centre of this paper. It will also discuss the role of regional and foreign banks, which are the main drivers of the integration into regional markets and the introduction of international standards and practices.

The region of former Yugoslavia

After World War II, the former Yugoslavia existed as a centrally-planned economy split into republics with a different level of independence in the last decade of the 20th century. The Disintegration of Yugoslavia was followed by wars which were stopped only with international support and peacekeeping forces. Afterwards, six independent states were established within the borders of the former Yugoslavia.

Previously a common market which comprised 22.8 million citizens, the region is now characterised by economic differences. Slovenia (the Republic in the North-West of former Yugoslavia) is most developed and is now a member state of the European Union. Croatia is on the list for the next round of applicants. The other Central and Southeast republics of the region are less developed: Serbia and Montenegro, as well as Macedonia, signed accession agreements with the EU. The rest of the region is in the process of negotiating conditions with EU authorities regarding stabilization and the implementation of the accession agreements with the EU.

Development differences increased significantly due to the harsh disintegration

[1] The former Yugoslavia encompasses Bosnia-Herzegovina, Croatia, Slovenia, Macedonia, Serbia and Montenegro. Albania does not belong to this group.

of former Yugoslavia. Whereas Slovenia now records a GDP per capita higher than several earlier member states, the level of development in the other countries still lags behind. Table 1 provides an overview on the basic data of the countries of former Yugoslavia. [2]

The economic outlook is good. Analysts from the IMF expect that the gross domestic product (GDP) will rise 4.5 or 4.8% a year (real) .[3]

Legislation

Due to the implementation and harmonisation with the legislation of the European Union the newly established states adopted new laws or adapted existing ones. As for housing finance, Serbia, Macedonia and Montenegro adopted a new Law on Mortgage, which defines special procedures for mortgage disclosure.
Serbia adopted a Law on a Government Agency for the Insurance of Mortgage Loans, with a mission to reduce credit risk for investors. Slovenia adopted a Law on Mortgage Bonds and Communal Bonds which is very similar to the German Pfandbrief law. .

Property registers could be a potential problem, as they should be electronically organized, with a high level of performance to track all the changes of ownership and a short time to accept mortgage rules. It can be expected that public registers, registers of real estate etc will be made up in an electronic form, providing necessary transparency that is essential for generating mortgage rights and conditions for values that equal to financial assets and liabilities. Some changes are evident in the region. The Croatian government decided to offer financial support to create a land and real estate register. Serbia arranged a non-interest loan with the support of the World Bank Group worth USD 30m which will be used to prepare efficient land and real estate registers. This project is of particular importance for the country since nearly half of the property is not registered. A similar problem is known in Kosovo.

Table 1: Basic data on former Yugoslavia 2005

	Area	Population in 000	GDP per capita in € (PPP)	GDP real growth %	Official Currency	Rating		CPI in 2005
						Moody	S&P	
Slovenia	20,273	1,997	18,900	3.9	SIT	Aa3	A+	2.5%
Croatia	56,542	4,439	11,000	4.3	HRK	Baa3	BBB-	3.0%
Bosnia and Herzegovina	51,129	3,850	6,140	6.5	C. Board	B3+	-	2.9%
Serbia	88,361	7,570	6,210	6.5	CSD	-	BB	16.2%
- Kosovo	11,300	1,800			€	-	-	
Montenegro	13,812	630	5,790	4.0	€	-	BB	2.5%
Macedonia	25,713	2,049	5,980	3.6	DEN	-	BB+	0.6%

Sources: Bulletins of Central banks, Ministry of Finance, S&P, WIIW, 2006

[2] On January 1, 2007 Slovenia will adopt the euro as its official currency. From June, 2004 Slovenia has been on the ERM 2 system

[3] IMF, Outlook, April, 2006

Housing stocks and needs

The housing stock in all parts of the region has been fully privatised. In some parts, it was destroyed during the conflicts and wars in the late 1990s. Most of it was rebuilt with the help of grants and domestic non-marketable government plans. Due to economic constraints during the transition period, housing construction decreased considerably.

Housing in the former Yugoslav countries has been characterised by underinvestment for more than 15 years. The total number of dwellings and number of new dwellings show that the golden years for housing construction were between 1980 and 1990. Table 2 shows the number of dwellings and new finished units from 1981 to 2004.

The table underlines the drastic fall in the construction in all parts of the region which is in contrast to the need for new housing. In addition, there is a great demand for renovation and modernisation of the existing housing stock. There is a regional construction boom in regions which offer potential for tourism. For example at the Montenegrin seaside, the number of dwellings rose from 6,245 in 1991 to 13,178 in 2003.

House prices and income

Housing affordability needs an acceptable relation between house prices and income. In this context, the region of the former Yugoslavia gave some specific relations, especially in the central and south eastern parts.
Official statistics are incorrect since they cannot take into consideration the level of hidden incomes, the false indication of sales prices in the sales contracts to lower property tax and the considerable amount of cash transactions. However, the statistics show that incomes are still low in relation to house prices (as indicated in table 3).

Table 2: Number of dwellings and new finished units 1981-2004.

	No. of dwellings in 000			No. of new finished dwellings		
	1981	1991	2001	1981	1989	2004
Slovenia	586	689	777.2	14,674	8,541	7,004
Croatia	1,381	1,780	1,876.1	30,439	20,341	20,358
Bosnia & Herzegovina	1,015	1,295		30,274	25,445	
Serbia	2,580	3,036	2,981[4]	57,166	48,274	16,388 [5]
Macedonia	436	549	698 [6]	11,678	10,864	4,468
Montenegro	131	207	253.1[7]	4,944	2,771	3,116
Ex-Yugoslavia/ Total	6,130	7,556 [8]		149,175	116,236	

Source: Official Statistic Bulletins former Yugoslavia (for years 1981-1991), National Statistics for the year 2004, own calculations

Table 3: Average square metre prices for newly built dwellings in capitals in 2004 and average monthly gross salary in 2005

State / Capital	Price m² in €	Average monthly gross salary in €
Slovenia – Ljubljana	1,360.2	1,151.7
Croatia – Zagreb	1,238.4	838.7
Bosnia and Herzegovina – Sarajevo		395.5
Serbia – Belgrade	1,248.7	317.5
Montenegro – Podgorica	803.6	326
Macedonia – Skopje	709.5	346.6

Source: Official Statistic Bulletins - conversion in € (official exchange rate) of central banks, WIIQ, 2006

[4] Census 2002
[5] Dates for the year 2001 excluding Kosovo
[6] Census 2002
[7] Census 2003
[8] Estimates for 1991 (the last year for this country)
[9] Prices for new finished dwellings on official statistics

Monetary policy and financial market infrastructure

After the disintegration of the former Yugoslavia, the new states established their new central banks as regulatory bodies in charge of monetary policy, and with the task to achieve a stable financial system. Whereas Slovenia[10] , Croatia, Serbia have their own currencies, Montenegro and Kosovo adopted the Euro as official currency. In Bosnia-Herzegovina, the convertible mark (BAM) is linked to the euro through a currency board.

Bank restructuring and privatisation is largely completed. The banking sectors are characterised by high shares of foreign ownership (mostly by Austrian and Italian banks). However, some banks from this region have become active in other countries of the former Yugoslavia. These banks are often interested in smaller banks. For example, there were ownership interests of Nova Ljubljanska Bank (NLB) in Bosnia-Herzegovina, Serbia and Montenegro, and Macedonia. Recently, Komercijalna Banka from Serbia invested in another bank in Montenegro.

The presence of foreign banks has been facilitated by liberalising the national banking sectors. The most dominant investors in the former Yugoslav countries are Raiffeisen, Erste Bank, Hypo Alpe Adria Bank from Austria (in Slovenia, Croatia, Bosnia-Herzegovina, Serbia and Montenegro). Italian banks (Banca Intesa, Unicredito-HVB-BA-CA[11]) are owners of banks in Slovenia, Croatia, Bosnia-Herzegovina and Serbia. Société Générale from France is the owner of SKB bank from Slovenia, Splitska Banka from Croatia, Podgoricka Bank from Montenegro and also runs a branch network in Serbia. Greek Banks (e.g. Emporiki Bank) are active in Serbia and Macedonia.

In some parts of the region (Croatia), the banking market in terms of ownership has been almost completely given up to the foreign capital (91%), while in the other parts of the region, except Slovenia, the presence of foreign banks is becoming increasingly dominant (Serbia, Bosnia-Herzegovina, Montenegro). The share of foreign banks is much higher than 75%.

All countries have inaugurated the establishment of stock exchanges. In Slovenia and Croatia, there is an active trade of shares and government bonds on the stock exchange, whereas in Serbia, the stock exchange is nearly not existent. Stock exchanges in Bosnia-Herzegovina (Banja Luka and Sarajevo), Macedonia and Montenegro (NEX Montenegro) use the stock-exchange trading system of the Ljubljana Stock-Exchange. The basic idea of the implementation of similar IT platforms on the stock exchanges is to create a regional link[12]. The main characteristic of all these stock exchanges is a lack of quality bonds and other debt securities, except government securities. In addition, they have not yet registered trade with mortgage related securities.

Investment funds were established only recently in the region. In Slovenia and Croatia, private pension funds are already active. There are two private real estate investment funds established in Croatia. Especially, pension funds face a lack of securities (primarily bonds) in which the collected capital of the savers can be invested. Government bonds are the only low risk alternative.

The insurance sector is less developed then the banking sector. A more developed insurance sector exists in Slovenia (insurance premiums were equivalent to 5.3% of GDP in 2005), followed by Croatia (3.2% in relation to GDP in 2005). In the other countries, domestic insurance countries dominate the market. The most active foreign insurance companies are Grawe, Generali and Allianz (mainly in Slovenia and Croatia).

Main characteristics of housing finance

Housing finance is rapidly growing in all countries. After 15 years of underinvestment, high demand for housing finance products is a result of macroeconomic stability, foreign banks' credit activities and rising competition in the local markets.

In some countries (Slovenia, Croatia), the growth of mortgage debt and housing loans is partly the result of government intervention. These countries also note a strong increase in house prices. Prices in the capital cities (denominated in Euro) grew on average by 4 to 7 percent a year between 1996 and 2004.

The main characteristics of banks' housing loans are:

- Annuity mortgage loans mostly with fixed interest rates
- Repayment rates are indexed to the Euro
- Standardised banking procedures,
- Mortgage as a collateral
- Terms vary from 10 to 25 years.

In the nineties, the typical mortgage (housing loan) was a ten-year repayment mortgage. The short mortgage term was the result of a relatively high nominal interest rate, which made long-term mortgages relatively unattractive. Most mortgages were offered with interest rates that were fixed above the level of inflation. The typical LTV (Loan to Value) ratio was quite conservative, at 50 percent, and the income criteria applied by lenders limited mortgage repayments to no more than 1/3 of the borrower's disposable income. Because of the country's high house prices and the low payment to-income ratios, LTV ratios were often far below the 50 percent threshold.

As a result of bank competition and better legislation, mortgage terms were extended from 10 to 25 years, interest rates were lowered and LTV ratios were higher (75-

[10] From January, 1. 2007 full adoption of euro

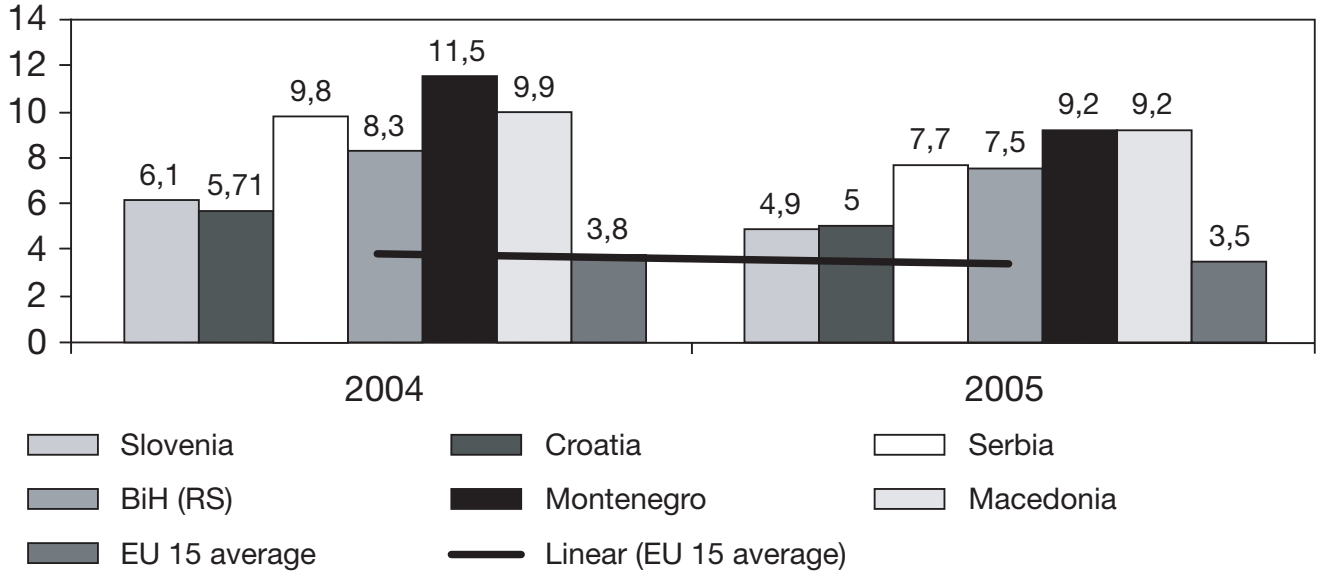
[11] After integration of the Unicredito Italiano and HVB, the management announced that the former Yugoslav banks will be managed by Bank Austrian Creditanstalt – BA-CA from its Austrian headquarter.

[12] Information and trading statistics could be seen at www.seem-on.net

80%). Payment to income ratios rose up to 50%. Often, banks took into consideration the whole family income.

Interest rates vary from country to country as figure 1 shows. Interest rates are still higher than the average interest rate in the EU 15 although the gap has narrowed (especially in Slovenia and Croatia). The main reasons for these differences are macroeconomic stability, access of "domestic" banks to foreign funds from foreign banks etc. Government intervention (mainly in Serbia) has also influenced the development of interest rates.

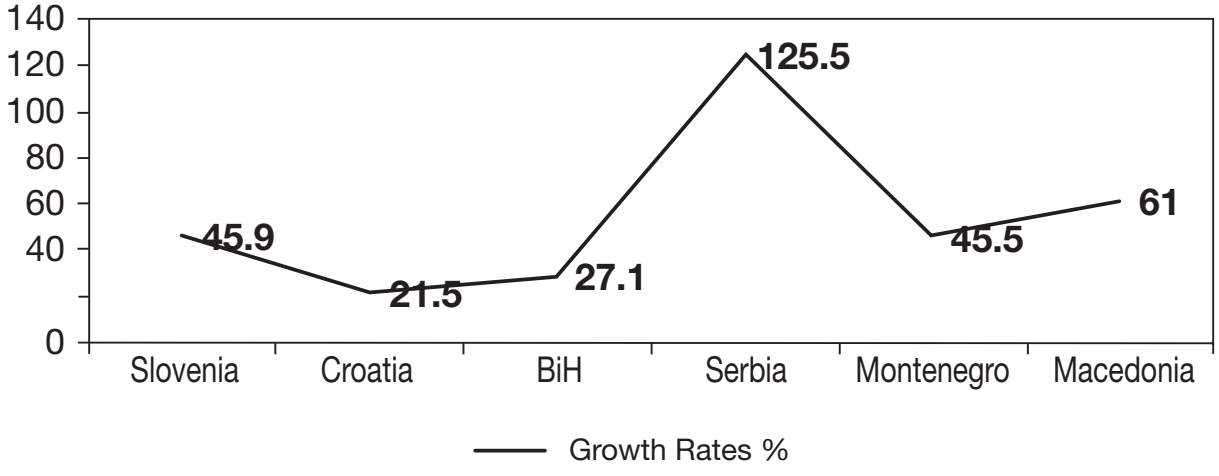
Figure 1: Average banking active interest rates on housing loans (in %) 2004-2005



Source: Central banks, own calculations, 2006

Figure 2 shows the mortgage loan growth rates in the former Yugoslav countries.

Figure 2: Housing loans growth rates (in %) in 2005 compared to 2004

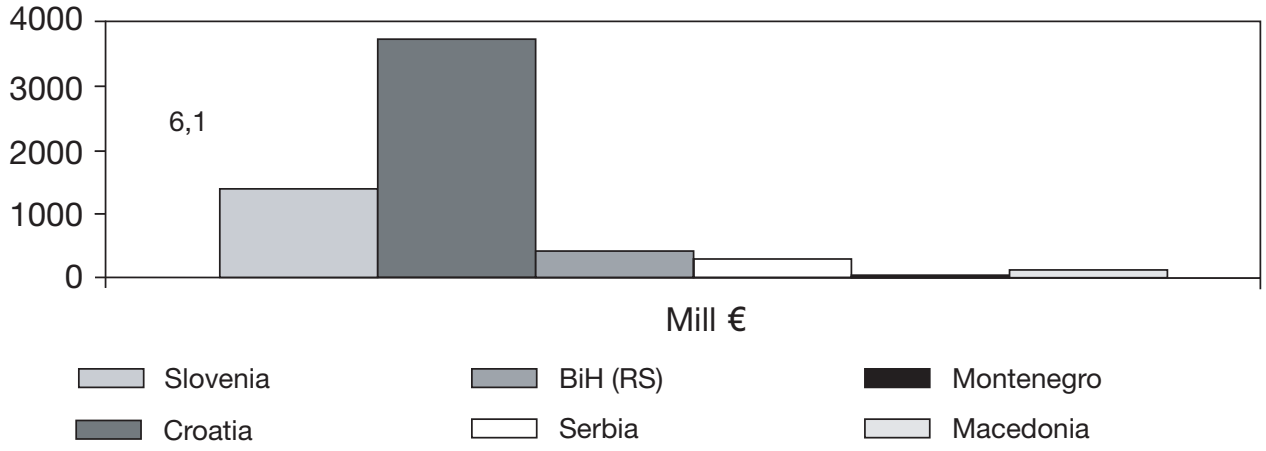


Source: Central banks, own calculation, 2006

However, the total value of mortgage debt is higher in the more developed countries such as Slovenia (EUR 1.4 billion) [13] and Croatia (EUR 3.7 billion) . In the other countries, mortgage lending started only one or two years ago. Double digit growth rates are likely in the next years. Figure 3 shows the value of housing loans converted into Euro at the official exchange rates of respective Central Banks.

The highest penetration of mortgage lending activities is recorded in Croatia and Slovenia with a share of 13.4% of mortgage debt to GDP and 7.2% respectively. Serbia and Bosnia and Herzegovina offer considerable potential for future development. In the whole region, experts reckon that total mortgage debt will rise to more than EUR 10 billion, a significant volume for securitisation which could eventually be organised through a central regional platform.

Figure 3: Housing loans in mill EUR on the end of 2005



Source: Central banks, own calculation, 2006

Potential funding sources

The increasing need for reconstruction of the housing stock in the region can be met only by creating a financing model that would be long-term and funded from stable sources. The model must be sustainable and have a clear strategy that is attractive to potential foreign financial investors.

However, domestic funds should be the primary source of funding. Specific-purpose funds for housing construction already exist in Slovenia and Croatia and they are mainly the result of the budgetary allocations for those purposes. The source of these funds is created through reallocation of financial assets obtained through privatisation of flats in the first years of transition.

Savings of the local population potentially represents the biggest initial source of income for this model. A high level of savings outside the formal banking sector exists in Bosnia-Herzegovina, Serbia, Montenegro and partly in Macedonia. The conversion of different currencies into EUR (2002) has shown that citizens have a large amount of savings. Conversion into EUR, reforms of the banking sector and market liberalisation have helped to increase the inflow of deposits into the banks, which provides an incentive for a more significant supply of housing loans.

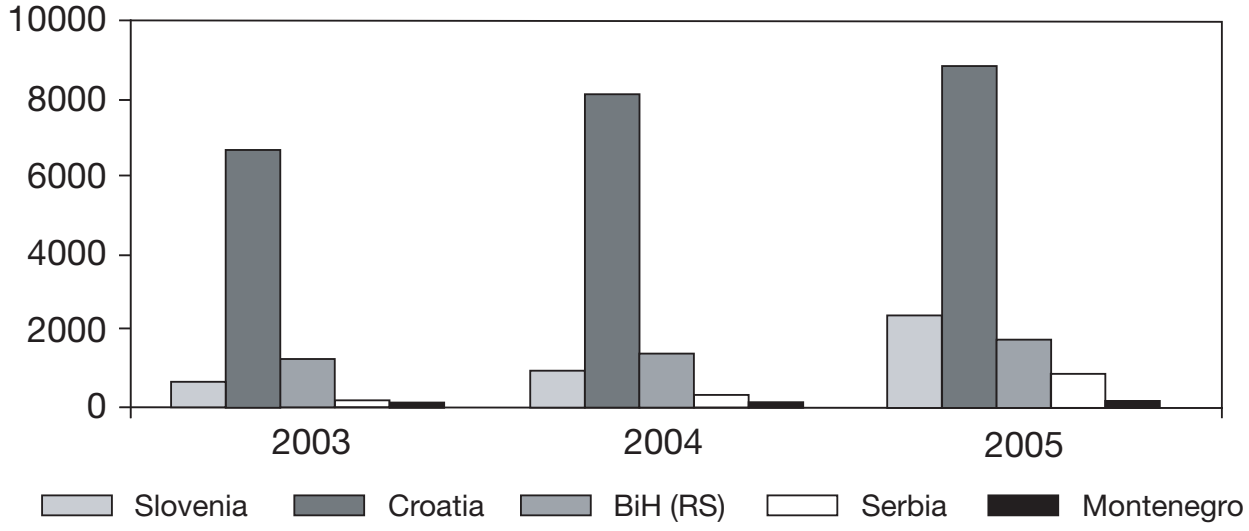
Some banks have access to specialized credit lines from foreign banks. As a result, net foreign liabilities of banks are in direct correlation to the growth of household loans and special housing credits as shown in figure 4.

Other funding sources are investment funds which have grown in importance. For example, in Croatia the total asset of 10 investment bond funds amounted to EUR 229 million at the end of 2005 The Slovenian fund industry consists of voluntary pension funds, mutual funds and investment funds. Financial institutions which collect voluntary pension insurance recorded an investment portfolio of EUR 592.5m (as per end of 2005). Over 40% of their portfolio is invested in government bonds. The life insurance sector is not yet an important funding source for mortgage loans (with the exception of Croatia and Slovenia). In Croatia, life insurance premiums amounted to EUR 254m in 2005 and in Slovenia to EUR 355m.

Household savings still do not constitute an important funding source for mortgage loans. As figure 5 shows, however, all countries record an increase in savings. The trend is to longer-term savings and in local currency.

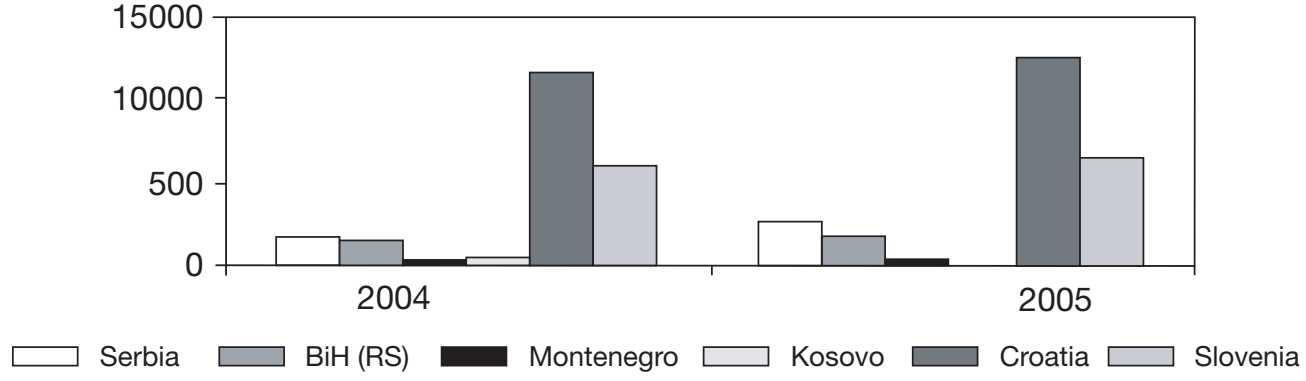
[13] Central banks dates – conversion in EUR on official exchange rates.

Figure 4: Net foreign liabilities of banks in mill EUR for the years 2003-2005



Source: Central banks, own calculation, 2006

Figure 5: Household savings in banks in mill EUR 2004-2005



Source: Central banks, own calculation, 2006

Further funding sources are remittances from relatives living mostly in western European countries (eg Austria, Germany, and Switzerland). According to World Bank estimates, for example, Serbia receives about USD 4.3 billion per year from Serbian people who live outside the country. A similar situation is observed in Kosovo, Bosnia and Herzegovina, Montenegro and Macedonia.

Government intervention

After privatisation of the once state owned housing stock, the governments of the former Yugoslav countries completely receded from intervention in the housing markets. However, in Slovenia, Croatia and Serbia, the state has introduced measures to support the development of housing finance.

In Slovenia, the governement established the National Housing Fund in 1999 which operates savings linked credit schemes with maturities of 5 and 10 years and preferential interest rates for the loan phase which is linked to the fullfilment of the savings phase. The savings plans are offered through the banking system.

The interest rate is 1.65% for the 5 years saving option and 3.0% for the 10 years savings option. Government subsidies are

equal to 1/12 of the saved amount. Participants in the saving scheme are entitled to take up a housing loan which is two times higher than the saved amount. Interest rates are 2.45% for a loan with 10 years maturity and 3.80% for a loan with a 20 years maturity.

There is a similar, but slightly different model in Croatia. A part of the revenues in the state budget is allocated to encourage housing construction on the basis of a special savings plan. The Government provides a savings bonus to participants of this scheme. The savings schemes are modelled on the German bauspar system.

The savings schemes are offered through specialised institutions. Spending on the savings subsidy rose from EUR 25m in 2002 to EUR 48.2m in 2004. This increase incited the government to reduce the subsidy amount. In addition, the specialised savings banks are allowed to offer bridge loans for those savers which have not yet completed the savings period but would like to take up a loan.

With the introduction of these savings schemes, both the Slovenain and the Croatian government intended to improve housing affordability.

Serbia adopted the Canadian insurance housing credit model. The volume of new housing loans insured by this government institution in March 2006 was EUR 58m. The Montenegrin government made a campaign for interest rate subsidies which lead to reduction of the market interest rate by 2.4 percentage points (from 6 % to 4 %).

Potential problems

Realisation of this project could face a series of problems, despite harmonisation of the legislation and activation of citizen's savings.

Potential problems can appear for both credit beneficiaries and financial institutions. Stability of jobs and ability to repay long-term housing credits can be of special importance for the beneficiary.

Granting housing credits requires quality assessment of the borrower's creditworthiness. In a situation when in some parts of the region the income is relatively low and where there is a grey market, this phenomenon makes creditworthiness assessment very difficult. One of the solutions for such a situation could be a joint repayment of credits (joint liability for a loan by spouse, parents, etc). Many foreign banks offer this solution as a possibility and that is a way to reduce credit risk. People in the region are still attached to their families and younger people in the less developed parts of the region are still dependent on their parents.

Linked to the income instability are the high interest rates which have a negative impact on affordability. Although government support of savings schemes or mortgage default insurance may help to decrease the interest rate burden for the borrower, only broad legal reforms and rising competition will bring housing interest rates down (Beĭovan, 2004).

By resolving the problem of credit repayments and extending the repayment period, a regional agency for securing credits could provide a special incentive. Commercial banks would approve credits, while credit beneficiaries would buy insurance and thus minimize the risk of repayment and possible default.

Perspectives

The mortgage market in the region of former Yugoslavia could be an efficient instrument to stimulate saving activities. However, the creation and production of standardised credits, good repayment monitoring and securitisation of mortgage portfolios which could be sold to foreign investors would offer a promising path to increase housing finance in the region.

Having in mind the small size of these markets, it is evident that its perspective lies in its integration with international markets for loan and investment capital. Foreign banks that are more and more present in the region will become the main connection to foreign investors. It is likely that domestically owned banks will lose market share since they face difficulties in competing with foreign banks. Foreign banks would be the main drivers for standardised mortgage loan procedures which are a necessary prerequisite for the securitisation of mortgage loan portfolios.

Guarantee institutions are necessary and it is exactly the size of the potential regional market that can be the most attractive factor for establishing a "cross-border" guarantee institution, ie harmonisation of work and savings-guarantee schemes of the existing national institutions. Bigger regional banks of the former Yugoslavia could establish this type of institution. This institution should be established as a private public partnership (PPP).

References:

Amann W. (2005): How to Bust Rental Housing Construction in CEE/SEE Countries – *Housing Finance International No. 2*- London pages 24-32.

Batchvarov A., Collins J., DePauw X., Spencer J., Davies W., (2003): *Merrill Lynch Guide to International Mortgage Markets and MBS* – London: MLPF&S

Bezovan, G. (2004) Housing Policy: Free Market, Patchwork Or The Part Of Welfare State Programmes, *Paper Presented at ENHR Conference 2004,* Cambridge

Buckley M., Van Order R. (2005): Housing Finance in Transition Countries: Finding Bills on the Street in Hegedus J. Struyk R. (ed.): *Housing Finance New and Old Models in Central Europe, Russia and Kazahstan* – Open Society Institute Bucarest, pages 127-149. available at www.mri.hu

Butler S., Merstallinger P., Duber A. (2002): Legal and Financial Aspects of the Slovenian Mortgage Banking System – *Unpublished paper Ministry of Finance* – Housing Finance and Mortgage Reform Component, Ljubljana

Glomazic, M. (1933). Istorija drЇavne hipotekarne banke Kraljevine Jugoslavije 1862-1932, (History of Government Mortgage bank Kingdom of Yugoslavia 1862-1932), *Naucna misao*, Beograd,

Loic C., Hassler O., Lea M.(2004): Mortgage Securities in Emerging Markets - World Bank, *Policy research Working paper* 43 pages

London Economics (2005): The Costs and Benefits of Integration of EU Mortgage Market, Analytical Study

Low S., Sebag-Montefiore M., Dubel A. (2003): Study on the Financial Integration of European Mortgage Market - Mercer Oliver Wymen Study - avaliable at www.hypo.org in February 2004.

Lowell L. (2001): Mortgage Pass Through Securities in Fabozzi F. (ed) *The Handbook of Mortgage Backed Securities* – New York: McGraw Hill, pp. 25-51

Mortgage Banks and Mortgage Bonds in Europe (2003) – Baden-Baden: Nomos Verlagsgesellschaft

Pichler- Milanovich, N. (2001) Urban Housing Markets in Central and Eastern Europe: Convergence, Divergence or Policy "Collapse", *European Journal of Housing Policy*, 1:pp.145-187.

Rabenhorst C., Butler S. (2004): Assessment of the Legal Framework for Primary and Secondary Mortgage Market in Croatia

Ribnikar I. (2001) The Market of former Yugoslavia: Opportunities and Challenges From the Slovenian Perspective – E*conomic and Business Review* 3-4, Ljubljana pp.181-190

Spain R. Gregory A. (2004): Minimum Standards and Best Practices for Mortgage Loans – European Bank for Reconstruction and Development

Stephens, M. (2002): International Models of Housing Finance: *Housing Finance in the Western and Transition Economies'*, in Yasui, T. (ed) Housing Finance in Transition Economies, Paris: OECD, pp. 175-182.

Tsenkova, S. (2003). 'Housing Policy Matters: The Reform Path in Central and Eastern Europe: Policy Convergence?' in Tsenkova, S. and S. Lowe (eds) *Housing Change in Central and Eastern Europe: Integration or Fragmentation*. Aldershot: Ashgate Publishing Limited, pp.193-205.

Tepus, M. M. (2004) Analiza modela stambenog finansiranja u Republici Hrvatskoj, (Analysis model's of Housing Finance in Croatia) *Pregledi- Hrvatska narodna banka*, 18: 1-36.

Statistical Yearbook SFRY (1991) – Federal Statistical Office, Belgrade, 780 pages
Statistical Bulletin of Central banks and Statistical Office from region of former Yugoslavia – Various issue, 2002-2006
WIIW – Macroeconomic indicator for SEE countries March 2006, available at www.wiiw.ac.at

Subprime mortgage lending: recognising its potential and managing its risks

By Edoardo Turano, Experian – Scorex's Business Consultant, Experian - Scorex

Risks and opportunities in subprime mortgage lending

Subprime mortgage lending offers many opportunities for growth and profitability. While this market is already well developed in the US and the UK, in the rest of Europe there is still a low availability of non-standard mortgage offers. However, recent research suggests there is a significant untapped demand for this type of product in Europe. Many lenders are therefore trying to enter this market by expanding their product offering to reach a wider customer base.

To be successful in this market though, lenders will need to address the issues of funding and risk management. Many lenders, in fact, underestimate the higher risks in subprime lending and its proper management, ending up with losses. This article presents an outline of a quantitative approach to risk evaluation and risk based pricing as an effective tool to deal with regulatory compliance and risk management. This type of approach brings many benefits when correctly implemented, although it does present some difficulties in its practical implementation especially to entrants to the subprime mortgage market.

What are subprime mortgages?

The term subprime (also called non-conforming or non-standard) defines a specific lending market sector where borrowers are considered as posing a higher than standard credit risk (as revealed, for example, by their credit history) and that do not qualify therefore for the prime market. The availability of subprime products is not limited to mortgages but it includes other typical retail products such as personal loans and credit cards.

Considering mortgage products, subprime loans are offered to borrowers who represent a higher level of risk with respect to standard mortgage underwriting guidelines. These loans are characterised by interest rates (and fees) higher than the standard prime rate that is available in the market at a given point in time. The most common categories of applicants who fall into the subprime mortgage segment are:

- Borrowers with a poor credit history (previous credit problems);
- Borrowers asking for high Loan to Value (LTV) mortgages;
- Borrowers with a high Debt to Income ratio;
- Borrowers who cannot document all of the underwriting information in their application.

Statistics show that loans to this type of borrower are characterised by high default rates (borrowers falling into arrears which cannot be recovered) and high loss rates (lender's loss after repossession compared to original loan amount) and are therefore considered as posing significant risk.

Subprime loans are offered with higher than standard interest rates, as the lender needs to cover higher credit losses and overhead costs (related to underwriting, servicing, and collecting the loans) compared to prime loans. The difference [1] is generally in the order of 3 to 4.5 per cent over the base rate. Given the higher risk implied by such loans, usually subprime lenders try to cover the higher related costs through [1]:

- frequent use of early redemption charges;
- frequent requirement for Mortgage Insurance;
- higher commission fees (with differences compared to prime loans up to 1% of the credit facility).

An overview of the European subprime mortgage market

Recent research [2] indicates that there is a significant demand in Europe for high risk mortgage loans. This has been valued as ranging from 400 billion euros to over 1,200 billion euros in the medium term. This forecast growth depends on future house prices and on regulatory issues.

Currently, the availability of high risk products in Europe is fairly limited, especially compared to the US and UK. For example, in most European countries it is very difficult for borrowers to succeed in obtaining a mortgage with a loan to value higher than 80%. Other examples are loans to people with poor credit histories, self-certified income or for older age applicants. All of these products are generally not easily available although there is quite a difference among countries with the UK being recognised as the most developed European mortgage market. Estimates of the subprime market in the UK indicate a

share in the order of 10% of total mortgage market value [3]. In the US instead, the market share of subprime loan originations was approximately 20% of the total mortgage market in 2004, and subprime mortgages originations have been growing at an average annual rate equal to 25% from 1994 to 2003 [4].

There are however many factors that justify expectations for a likely expansion of the European subprime mortgage market. First of all, a general widespread growth in credit use (not limited to mortgages) is evident. The demand for mortgage credit has been increasing in particular among non-traditional borrowers. A typical example of this class of borrower is immigrants, whose share of the European population is becoming more and more substantial. Immigrants are generally considered as subprime borrowers as they are characterised by limited credit histories, low incomes and are likely to apply for high loan to value mortgages. Moreover, the growth in self-employment or in flexible working arrangements (with less certain and regular income streams) has also somehow modified the "traditional" consumer landscape, pushing further the demand for innovative mortgage products that do not rely on standard underwriting practices.

Another driver of subprime loans growth worth highlighting is the increasing popularity in Europe of mortgage insurance. This allows the lender to transfer part of the risk to the insurer. If the borrower defaults on his payments and the loan is subsequently written off, part of the lender's loss is covered by the insurance underwriter. With mortgage insurance, many lenders are willing to offer higher risk products. In Italy for example, mortgages with a loan to value up to 100% are becoming popular thanks to mortgage insurance, as generally regulatory requirements would not allow banks to offer housing loans with an LTV higher than 80%.

Two important aspects in which European mortgage lenders are lagging behind their US counterparts regard data capture and analysis. In the US, credit-scoring agencies can access 80–90 per cent of people's credit history [1]. In the UK, the most developed European mortgage market, the corresponding percentage is much lower. Furthermore, in the US there is wider availability of historical data on subprime loans on which robust quantitative analysis can be based. Regarding analysis, European lenders have obviously learned from the US business model in terms of risk management. However, many lenders still lack the necessary know-how and expertise to develop sophisticated pricing models necessary to handle the risk in subprime mortgages.

The high risk in subprime mortgages

The increased risk in subprime lending needs to be carefully assessed and managed. Clearly, a lender who decides to enter the subprime mortgage market has to be prepared to deal with higher delinquency rates than those relative to standard prime mortgages. An analysis of a real portfolio showed that for subprime loans serious delinquency rates [4] can be 20 times higher than for prime loans. Apart from high delinquency rates, lenders should also expect higher than average loss rates from their subprime portfolio. The combination of high delinquency rates and high loss rates may result in risk that could be unmanageable. This is why within the subprime segment it is necessary to distinguish among different classes of customers in terms of risk. These range from lower risk customers (near prime), through medium risk, and to high risk customers. While the majority of lenders will only target the first two groups, the highest risk group is generally the target of specialized lenders, prepared to cope with the greater risks implied by such loans or who aim to profit through the repossession of the collateral (equity lending).

The reality is that many lenders try to enter the subprime market without the necessary requisites. As recognised by the US Comptroller of the Currency [5]: *"A number of institutions have incurred significant losses and other problems because of poorly structured subprime lending programs. Generally, these institutions underestimated the higher default rates and loss-on-default rates involved with subprime lending, as well as the higher overhead costs. Moreover, they frequently lacked the management expertise, business planning processes, and risk management processes necessary to manage these risks in a safe and sound manner."*

Pricing is the key to a successful subprime lending business

It is evident then that the most crucial element for a sub-prime lender is the assessment and the pricing of risk. This includes both a careful evaluation of the customer's riskiness at application and effective methods of dealing with loans that start to fall into arrears. An objective assessment of risk at application allows the lender to reject applicants whose higher risk cannot be offset by higher interest rates (considering obvious practical and legal constraints) and that are profitable only for lenders engaged in equity lending. Accepted applicants are then assigned an interest rate that reflect their risk.

Although all subprime lenders have a methodology to adjust the price on the basis of the borrower's risk, there are clearly different levels of sophistication. Many lenders, in fact, employ a fairly basic calculation, based on a coarse risk segmentation of their subprime customers, denoted by letters such as A- (the least risky category), B, C, or D (the riskiest category). Borrowers within each category are generally charged the same interest rate with minor differences among borrowers in the same risk group due to the negotiating ability of the borrower or the mortgage broker, and certain risk indicators such as property type or ability to document income. The risk segmentation, however, is often based on a limited set of risk drivers (eg LTV) that may not result in risk being homogeneous among each class. This causes lower risk customers within a class to be overcharged, effectively subsidising the higher risk customers within the same class who are being undercharged.

The segmentation may also be the result of expert judgment that, although it is an important element in all business decisions,

lacks the objectivity and consistency of quantitative analysis. As for the correct pricing for each level of perceived risk, this is a task that requires a significant effort in terms of data collection and analysis. Many lenders employing simplified pricing criteria find themselves incurring higher than expected losses.

The most advanced lenders rely on automated underwriting systems and on quantitative analysis for price setting. Automated underwriting systems evaluate applications using algorithms based on statistical analyses of historical data containing previous applicants' characteristics and their performance in terms of debt repayment. This is generally referred to as credit scoring. Credit scoring techniques are recognised as being more accurate and consistent than manual underwriting in determining the riskiness of individual loan applications. An accurate estimation of risk allows a more sophisticated quantitative approach to pricing to be taken, which in turn allows a lender to define clear and objective goals such as profit maximisation or volume increase.

An objective risk evaluation of subprime borrowers

Scoring can be defined in general as a statistical technique to predict, at a specific point in ti.me with the available information, the probability of a future event. Credit scoring is an instrument widely used by companies for the internal processes of portfolio risk measurement and management. It allows a lender to estimate the probability of future insolvency of a person requesting credit or of an existing customer. The profile is calculated on the basis of the information available at the moment of the decision. Application scoring estimates, at the moment of the request, the level of risk associated with each application before it is effectively approved. In practice, credit scoring results in the definition of a table listing the characteristics that provide the most predictive information, together with the associated attributes and weightings. A total score is obtained as the sum of the points in each characteristic. The total score corresponds to an estimate of the probability of default.

Even though scoring models have traditionally been used only to assess the default probability of a client, the true risk of a loan is given by its expected loss. Not every client with the same default probability has the same potential loss. Two clients with the same default probability can react differently to collection procedures and generate very different losses for the lender. The product of three different elements gives the expected loss: probability of default (PD), loss given default (LGD) and exposure at default (EAD). The PD is the likelihood that a client will default on his repayments in a given timeframe. The EAD is the value of the bank's exposure at the time of the borrower's default. This can be expressed either in absolute terms or in terms of a percentage of the loan exposure at origination. The LGD is the loss on a credit instrument after the borrower has defaulted. It is therefore a percentage of the exposure at default that takes into account not only the amounts recovered but also the associated direct and indirect costs. By building scoring models for each of these three parameters, a lender is able to have an objective and accurate estimation of the expected loss of a prospective client at the application stage. An example of the estimation of the expected loss using scoring models is given in the figure below. A given applicant would be associated to a different level of PD, LGD and EAD (expressed as a percentage of the original exposure) using the output of three scoring models. The product of the resulting values of these three parameters with the requested loan amount results in the estimate of the expected losses.

Figure 1 – Calculation of expected losses

Loan and applicant characteristics

PD scoring model	
Quantile PD	%
1	5
2	10
3	12
4	15
5	20
6	25
7	30
8	35
9	40

EAD scoring model	
Quantile EAD	%
1	50
2	58
3	65
4	68
5	70
6	72
7	74
8	78
9	80

LGD scoring model	
Quantile EAD	%
1	10
2	30
3	40
4	42
5	48
6	57
7	60
8	68
9	73

Loan amount = $100,000

Expected Loss = PD x EAD x LGD x Loan Amount = 0.12 x 0.58 x $100,000 = $3,967

There are three main drivers of risk for mortgages: LTV (there is in fact significant evidence that default rates rise sharply when the LTV is higher than 80%), debt to income ratios (DTI, measuring the ratio between instalment and monthly income) and credit bureau scores (accounting for experiences with other institutions for a more comprehensive assessment of the applicants' creditworthiness). These variables represent the key information used by credit scoring models to assess the PD and the LGD. Socio-demographic information (age, residential status, etc) of the applicant is also used to increase the accuracy of the models. As for the EAD, the main driver is the maturity of the loan. It is very rare for borrowers to default soon after they have received credit (unless fraud is involved) and when they have nearly completed the repayments. Estimating the time of default and knowing the repayment amount enables the lender to estimate the exposure at the time of default.

New entrants to the subprime segment are likely to have some difficulties in developing scoring models. Scoring models allow accurate predictions when they are developed on the basis of historical data that is representative of the characteristics of the target population. Therefore models developed for prime borrowers should not be used for risk assessment of subprime borrowers. Institutions should instead build models on data representative of the targeted subprime borrowers. However new entrants to the subprime segments will not have this data available, given that mortgage defaults appear generally several years after origination. In this case it may be possible for them to rely on external data. It is also possible to infer the behaviour of risky customers from an existing portfolio of prime customers by incorporating prior assumptions regarding the relationship between risk and risk drivers. For example, a portfolio of prime loans may not have customers with LTV > 80%. A possibility is then to assume a relationship between default rates and LTV for LTV values higher than 80%, using for example available evidence from the US market. This enables the subprime lender to build a scoring model for an extended range of LTV values while retaining all the evidence available in the existing portfolio (for example regarding the correlation between the variables).

Another issue which affects the estimation of risk for mortgages in general is that collateral risk can have a greater impact on loss than default risk. Credit risk estimation techniques are limited by the difficulty in forecasting changes in collateral values, regardless of their accuracy in assessing the creditworthiness of individual borrowers. Experience shows that collateral risk is difficult to measure [6] and, even more so, it is difficult to forecast over the typical life of a mortgage.

Some lenders, while recognising that credit scoring is a valuable tool, do not think that it can be applied to subprime lending. This is because the risk in subprime mortgages is driven by many qualitative factors. Therefore it is argued that an individual approach to underwriting is necessary. However qualitative evaluation criteria can always be combined to the results of the quantitative evaluation performed by the scoring model to increase the quality of the risk estimation. This approach is also taken for the credit risk assessment of small businesses (SME) and corporate clients where there are a lot of qualitative aspects (such as the quality of the management or the business perspective of the market sector where the company operates) used to integrate the quantitative risk evaluation.

A quantitative approach to risk based pricing for subprime lending

Risk based pricing (RBP) is the practice of charging different interest rates depending on the risk of the loan. A basic approach to the determination of the interest rate is based on identifying costs and then adding the required rate of return to determine pricing. An example of this approach, in its simplified version, is given in the following figure.

Cost of funding	4.50%
Operating costs	1.25%
Expected loss allowance	2.50%
Desired return	2.00%
Final price	10.25%

Figure 2 – Cost model for interest rate determination

This cost model incorporates all the items that should be taken into consideration in determining the price:

a) Cost of funds: the interest rate at which the lender can borrow money;
b) Operating costs: rate increase to include costs to originate, service and terminate the loan;
c) Expected Loss Allowance: rate increase to take into account the expected loss rate (PD x EAD x LGD) that can be estimated using scoring models as described above;
d) Desired return: takes into account the target return on the investment and should be such as to adequately remunerate the cost of the economic capital (for example, as from Basel II advanced internal rating approach or from any value at risk model) employed by the financial institution (also known as the cost of risk).

In a more comprehensive view of the approach, there are other items that can be considered such as relationship and competition adjustments. Relationship adjustments take into account the relationship and value of existing customers in terms, for example, of potential additional revenues to the lender in the form of a purchase of additional products or the introduction of additional clients. More valuable customers can be offered a higher discount. Competition adjustments allow lenders to take into consideration existing market conditions with a price adjustment that makes sure that the final price is competitive. Whilst the latter is quite usual, the former is more difficult to estimate given the several difficulties that have to be faced when dealing with the estimation of future

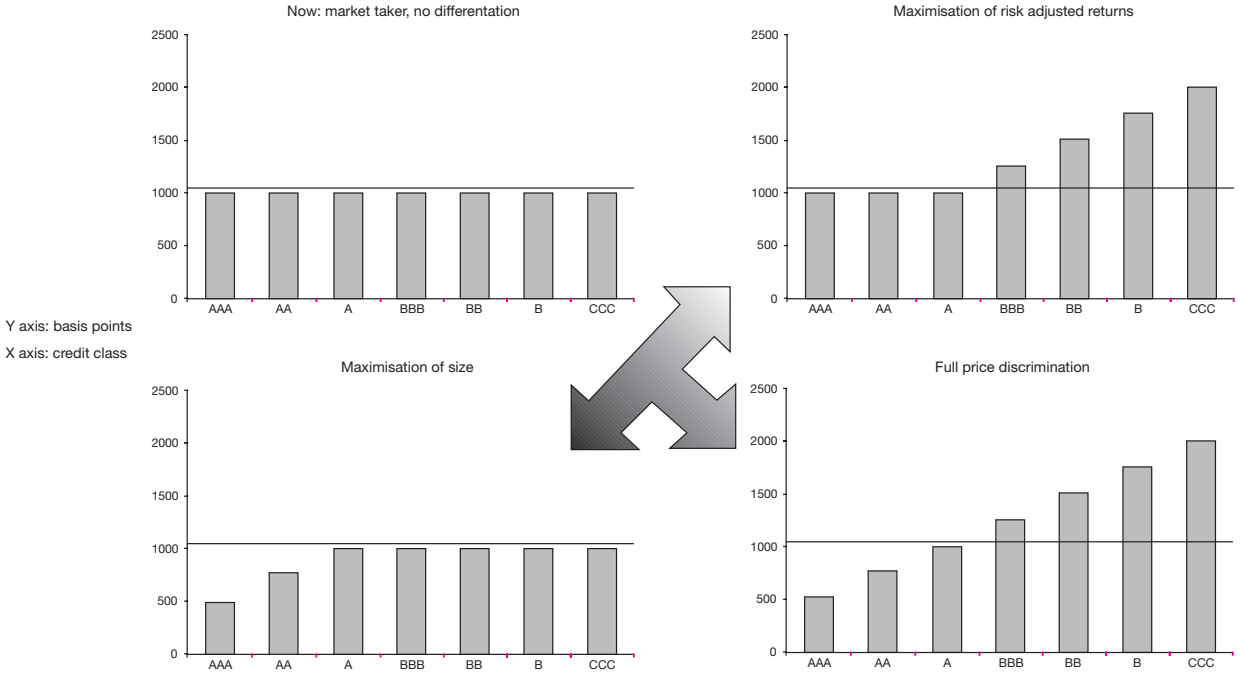
cross- (or up-) selling opportunities or the evaluation of the value of new customers potentially introduced by the applicant.

Given that under a risk-based pricing framework the price is more sensitive to risk, financial institutions adopting it can avoid the adverse selection effect. Adverse selection can affect lenders not applying risk-based pricing in a market where other lenders are. Higher risk customers will be offered higher rates by lenders operating a risk-based pricing strategy and will potentially migrate to those lenders offering a flat rate as this will offer them better value.

Flat rate lenders could then face a significant issue since, over a period of time, the profile of the portfolio could change with a lower proportion of good quality customers and an altered risk profile, which can significantly change the financial exposure of the organisation (as offered prices would be in fact more attractive to risky borrowers).

Another benefit of a quantitative RBP approach is that it allows for a differentiated set of strategies to be implemented. The following figure illustrates three possible strategies that can be adopted with a variable interest rate compared to a flat pricing strategy. With no differentiation, the interest rate is independent of the risk of the applicant (denoted in the figure as AAA for the less risky, to the more risky CCC). By charging a lower interest rate to low risk applicants it is possible to improve the volume of applications (maximisation of size) while still being profitable. A maximisation of risk adjusted returns results in a flat price for the lower risk grades and an increase in price for the higher risk applicants. A combination of the two previous approaches results in a full price discrimination with a trade off between volume and profitability.

Figure 3 – Implementation of different strategies for risk based pricing



The adoption of risk-based pricing brings benefits not only to lenders but also to consumers. Lower risk consumers are rewarded for their good financial performance and can benefit from increased choice and competitive rates. For higher risk consumers, the gap between mainstream and alternative finance sources can be significant. Organisations that previously would not have lent to these high risk consumers are now lending at an appropriate price, so risk-based pricing brings more of the population into the mainstream lending process.

Some limitations of risk-based pricing arise from constraints set by regulators. One example is the need to advertise interest rates. In the UK, for example, lending organisations must give the advertised rate, or a better rate, to 66% of applicants. This is simple when using a flat rate; however it becomes much more difficult with risk-based pricing, where there needs to be accurate portfolio information to determine the advertised rate. Another example is caps on interest rates set by regulators. This means that if risk-based pricing is used there may need to be a cut-off level based on interest rate, beyond which customers have to be declined.

Although the RBP practice is not without criticism, it allows lenders to set prices in an objective and transparent manner. This is very important in the subprime market where there are many concerns regarding fair lending. An objective assessment of client risk allows reputable lenders to offer fairly priced product to individuals who have difficulties in obtaining finance on standard terms and conditions. Serious lenders can therefore differentiate

themselves from predatory lenders [1] who instead attempt to make a profit in the subprime segment by:

a) marketing loans explicitly at those in debt;
b) offering loans with limited or no enquiries about income;
c) being interested in the value of the collateral rather than the borrower's credit- worthiness ('equity lending');
d) charging high brokers' or other advance fees;
e) charging very high interest rates not commensurate with the real risk of the applicant;
f) charging increasing interest when a loan is in arrears.

A key issue for the development of the subprime loan market is funding. While banks can raise money from savers to offer mortgage loans, smaller players, who may have no branch network, cannot rely on deposits to finance their lending. These institutions can raise funds for further lending by selling part of their loans (their assets) to institutional investors. This practice, called securitisation, is becoming more widely used for subprime lending. The credit risks are passed from the original lender to the institutional investor while the originator retains the loan servicing rights. An objective and consistent assessment of risk through quantitative analysis is therefore a key aspect of these transactions. This is particularly critical for the whole loan sale market. In a whole loan sale, an originator will sell a pool of loans directly to another institution, rather than through securitisation. The buyer pays an originator face value plus a premium for this pool. While in the US this type of fund raising is widespread, the European market has only recently reached a level of structuring sophistication and an understanding of fundamentals of the credit risk, liquidity, and relative value pricing to embrace the whole loan sales market [7]. A strong whole loan sales market is likely to be a key driver of growth for the European subprime mortgage market.

The evaluation of risk is a critical task for institutions purchasing subprime loans securities from other lenders. Purchasers must assess all costs needed to service these assets and the expected losses that will impact on profits. Some subprime lenders, in fact, charge borrowers high up-front fees that allow them to originate a high volume of loans that include very high risk customers, and this can put purchasers at a disadvantage. Furthermore, subprime loans, especially those purchased from outside the institution's lending area, are particularly at risk of fraud or misrepresentation (ie, the quality of the loan may be lower than the loan documents indicate).

One issue not to be overlooked regards the impact of an economic downturn. Adverse macro economic conditions have a particularly relevant impact on the less financially stable subprime borrowers. However, mortgage products have developed considerably in the last decade, without related risks being tested in times of economic stress. The need for stress testing required in the Basel II framework is therefore particularly relevant for subprime lenders who should test the effect of economic downturns on the creditworthiness of their portfolio.

Conclusions

There is a growing demand in Europe for higher risk mortgage products. This market offers many opportunities for profitability but it also involves considerable risk. Some prime and near prime lenders have already approached the market directly or through other companies they control or with which they have ad hoc agreements for the sale of subprime credit products. A quantitative approach to risk evaluation and more tailored pricing strategies can provide the competitive edge that will enable the first movers to acquire a dominant position in these markets.

References

[1] Munro, M., Ford, J., Leishman, C. and Kofi Karley, N. (2005) *Lending to higher risk borrowers: Sub-prime credit and sustainable home ownership. Joseph Rowntree Foundation*

[2] Mortgage Insurance Trade Association and Mercer Oliver and Wyman News Release (2005) *Untapped mortgage demand tops €500 billion across Europe*

[3] Financial Times (2006). *Fears over surge in high risk mortgage*

[4] *Inside B&C Lending, Vol. 10, Issue 4, February 14, 2005, p 1.*

[5] OCC bulletin 99-10 (1999) *Interagency Guidance on Subprime Lending*

[6] Temkin, K., Johnson, J.E.H and Levy, D. (2002) *Subprime markets, the role of GSEs and Risk Based Pricing.* The Urban Institute

[7] Bradley, E., Kane, B. (2005) *Europe's Whole Loan Sales Market Burgeoning As Mortgage Credit Market Comes Of Age.* Standard & Poor's Structured Finance

[8] Cataldi, G. (2003) *Profitability Optimisation: The use of Risk Adjusted Performance Measures.* Experian-Scorex White Paper

[9] Putt, J. (2006) *A profit driven approach to risk based pricing.* Experian-Scorex White Paper

[10] White, A.M. (2004) *Risk-Based Mortgage Pricing; Present and Future Research.* Housing Policy Debate Vol 15 Issue 3.

[11] Lax, H., Manti, M. , Raca, P. and Zorn, P. (2004) *Subprime Lending: An Investigation of Economic Efficiency*. Housing Policy Debate Vol 15 Issue 3.

[12] Collins, M., Belsky, E., and Case K.E., (2004) *Exploring the Welfare of Risk-Based Pricing in the Subprime Mortgage Market.* BABC 04-8

[13] *International Convergence of Capital Measurement and Capital Standards. A Revised Framework (2004).* Bank for International Settlements

[14] Crews Cuts, A. and Van Order, R.A. (2003) *On the economics of subprime lending*. Freddie Mac

The Montego Bay Declaration
of the
International Shelter Conference:
"Challenges of the Housing Market in the 21st Century"

Ritz Carlton Golf and Spa Resort

Montego Bay, Jamaica

29–30 May 2006

Overview

The Caribbean Association of Housing Finance Institutions (**CASHFI**) and the Inter-American Housing Union (**UNIAPRAVI**) in association with **USAID**, held the International Shelter Conference under the general theme "Challenges of the Housing Market in the 21st Century," on May 29-30, 2006, at the Ritz Carlton Golf and Spa Resort, Montego Bay, Jamaica.

The conference focused on two sub-themes.

- The first sub-theme of the conference was *"Global Market Developments and the Implications for Delivering Affordable Housing in the Future."* This theme explored, how these developments will translate into cheaper and better loan funding, and also into cross-border investment opportunities given the harmonization of industry practices (e.g., underwriting standards, information sharing between countries, and credit databases) envisaged under the *Caribbean Single Market and Economy* (**CSME**).
- The second sub-theme was *"Disaster Mitigation and Sustainable Shelter Development".* Experiences with disaster in the Caribbean were shared and best practices to minimize effect of disasters (e.g., strict adherence to sustainable housing standards and building codes) were promoted.

The conference brought together 59 participants, representing some 24 regional/international organisations from both the public and private sectors. The participants in the conference included a diverse group of (1) leading specialists in housing/housing finance, urban development, and disaster mitigation; (2) representatives of central and local governments, and public policy makers; (3) financial regulators, bankers, housing financiers, and business investors; and (4) professionals from Caribbean Basin countries, from countries that are members of UNIAPRAVI, and from the European Federation of Building Societies (**EFBS**). The conference engaged the participants in active discussions on the key topics highlighted next.

Conference Highlights

The conference was structured around six sessions, each one focusing on a specific issue associated with the overall conference theme, and the two specific conference sub-themes. These sessions addressed the following issues:

- *"Globalization: Challenges and Opportunities."* There was a presentation on the CSME, from the perspective of the Caribbean Community and Common Market (**CARICOM**); one on developing housing finance, from the perspective of the International Finance Corporation (**IFC**); a case study on the experiences of the EFBS; and a paper on funding perspectives of a housing lender, from the point of view of the Government Housing Bank in Thailand.

- *"Funding Strategies to Support the Mortgage Market."* Presentations were made on best practice and role of the state in developing and funding mortgage market, from the perspective of the World Bank; on developing regional and specialized funding strategies for housing, from the perspective of an integrated practice / outreach / service / research / education academic center.

- *"Strategies to Improve Access to Housing, Given the New Market Environment"*. This was a panel discussion moderated by the Director of the Sir Arthur Lewis Institute of Social and Economic Studies (**SALISES**) at the University of the West Indies (**0**).

- *"The Caribbean Experience."* Presentations were made on the impact of natural disasters on housing and shelter, from the perspective of the United Nations Economic Commission for Latin America and the Caribbean (**UN ECLAC**); on the ground rules for safe housing, from the perspective of the work done in the Geology Department of the UWI; and on construction quality assurance as a risk

reduction mechanism in the building sector in Grenada, from the perspective of the Organization of American States (**OAS**).

- *"Selected Approaches to Risk Mitigation and Management."* Presentations were made on mainstreaming hazard risk assessment, from the perspective of the Caribbean Development Bank (**CDB**); the need for an action agenda to achieve tangible results, from the perspective of USAID; and the catastrophe risk insurance initiative for the Caribbean and Latin America, from the perspective of the World Bank.

- Finally, there was a panel discussion on the issue of *"Moving Ahead: Short and Medium Term Strategies,"* moderated by the Director of the *Center for Housing and Urban Development* (**CHUD**) of the College of Architecture at Texas A&M University (**TAMU**). Representatives from the OAS, the CDB, USAID, UN ECLAC, ODPEM, and UNIAPRAVI identified possible strategies and actions that need to be taken by all key stakeholders, to meet the challenges of the housing market in this century. Their conclusions are presented next.

The presentations, discussions, exchanges of ideas, and sharing of experiences highlighted some specific problem areas that need to be addressed in the development of effective and efficient solutions to meet the challenges of the housing market in the 21st century.

1. Poverty is a vicious cycle that needs to be broken. Many people who are born poor have, throughout their lives, limited access to education, healthcare, and jobs. The lack of opportunity weakens the social/economic infrastructure in which they grow and develop, and perpetuates this situation in their children.

2. The current institutional, industrial, and technological capacity to plan, finance, develop, and deliver housing solutions for the poor is clearly deficient.

3. Efficient mechanisms to ensure the affordability, sustainable, and safety of housing solutions are inadequate.

4. The public is not sufficiently aware of the housing challenges being faced. As a result, levels of advocacy for the development of solutions to face these challenges, and engagement in the development of these solutions, are low.

5. Weaknesses exist in planning, financing, development, and delivery of affordable, sustainable, and safe housing solutions, which result in a need for deliberate government enabling role in housing initiatives, programs, and projects, and in addition, a need to:

    - Understand that housing policies and the politics of housing are not the same, and need to be addressed separately and differently

    - Foster more active engagement of the private sector in housing initiatives, programs, and projects, through strong, transparent, trustworthy, reliable, and accountable governance

    - Actively engage, in a linked, coordinated, and integrated way, the main stakeholders from public and private sector organizations (i.e., government and industry), the main actors and players (i.e., commercial enterprises and the professional community), and the principal beneficiaries (i.e., individuals, families, and communities), in housing initiatives, programs, and projects

    - Improve the economic base of the lowest level of society

    - Look at housing from a systems perspective, and apply systems thinking in the development of solutions, particularly, in balancing the multiple and diverse dimensions of housing initiatives, programs, and projects

    - Ensure the value, quality, and performance of housing solutions through sound decision-making based on reliable data and information

6. In reducing the risk in, and vulnerability of, housing solutions, there is a need to:

    - Form a common regional unit to address reduction and mitigation of risk and vulnerability to natural hazards in housing, including the development of a source book of strategies and best practices, and associated training programs for awareness building and implementation

    - Convene think tanks, strengthen networks, build partnerships, and facilitate the implementation of risk reduction initiatives that are contextually based and respond to the specific realities of countries

    - Develop assessment tools for establishing risks at a national level from an economic and financial planning perspective

    - Develop tools to evaluate trade offs between the cost of disaster assessments versus the cost of potential impacts and litigation

    - Follow up after a project receives approval on issues identified or addressed in the environmental impact assessment

    - Develop mechanisms for safe construction.

The conference also identified several **strategies and opportunities** to meet the challenges of the housing market in the 21st century. These include:

- Defining new urban planning and design solutions at different scales, from the complete city to specific neighborhoods

- Balancing the need for development with the need for best practices in risk management

- Developing new finance mechanisms for low-income housing to provide access to affordable, safe and comfortable housing

- Getting those who control financial resources to use the leverage to reduce natural and community vulnerability
- Developing and maintaining reasonable risk criteria for mortgage loans
- Balancing the roles of the government and the private sector
- Holding governments accountable for hazard litigation
- Making the construction sector accountable for the results of poor construction
- Developing the informal construction sector, including the implementation and application of standards in ways that are not punitive
- Developing innovative construction techniques and practices

Conference participants also identified several **areas of potential change** towards achieving the vision of affordable, sustainable, and safe housing:

- Get political leadership to understand that good shelter contributes to economic development, rather than treating it as a social good.
- Change the culture of financial institutions with small and incremental changes toward making enhancing the quality of life for the poor be one of their primary goals
- Make economies right, i.e., change the current approaches that are not working
- Increase the amount of economic resources available for the planning, financing, development, and delivery of affordable, sustainable, and safe housing for the poor
- Stop funding so many studies and rather, increase funding of pilot projects
- Link, integrate, and coordinate efforts to plan, finance, develop, and deliver housing solutions among all stakeholders
- Develop educational programmes on topics related to planning, financing, development, and delivery of affordable, sustainable, and safe housing
- Develop a legal framework for regulating and enforcing proper construction practices

At the conclusion of the conference, participants reached consensus on four pre-requisites to the development of effective and efficient solutions to meet the challenges of the housing market in the 21st century. These pre-requisites are specific calls for action that would help overcome the lack of clear definition and consistency in the role of government in each phase of the cycle of delivery of housing solutions; the lack of appropriate and sufficient government support; the embedded problems of corruption and abuse of power among stakeholders; the fragmented and disconnected approaches across the various phases of the cycle of delivery of housing solutions; the absence or lax application of codes and regulations; the lack of proper urban planning, specially in applying lessons learned; and the crumbling social infrastructure, eroding family values, and low levels of education. These pre-requisites are the basis of the **Montego Bay Declaration.**

The Declaration

The *Caribbean Association of Housing Finance Institutions* (**CASHFI**) calls upon the Governments, and the key public and private sectors stakeholders of the housing market in the Caribbean Region, to take the following courses of action toward the development of effective and efficient solutions to meet the challenges of the housing market in the 21st century:

… **First**, the alleviation of poverty, and the provision of affordable housing are inextricably linked. Governments, and stakeholders in the public and private sectors, must acknowledge this link and, that they must work together at local, national, and international and regional levels to pursue integrated solutions both to alleviate poverty and provide affordable housing for the most disadvantaged sectors of the population.

… **Second**, governmental and private sector initiatives to plan, finance, develop, and deliver housing solutions need to address formally, explicitly, and proactively, in an integrated way, the three dimensions of sustainability - environmental, social, and economic; and elimination, reduction, and mitigation of risk and vulnerability to natural hazards.

… **Third**, governmental and private sector housing initiatives cannot afford to continue following the same strategies, mechanisms, and processes that have been used to date. Housing initiatives for the 21st century require new approaches that are bold, innovative, systems based, and contextually sensitive, given the interrelationships, interdependencies, and complexity of the external factors affecting the delivery of housing solutions

… **And fourth**, the challenges of the housing market in the 21st century cannot be overcome by government officials, policy makers, regulatory agencies, finance institutions, community leaders, planners, architects, engineers, suppliers, builders, or end-users alone. Rather, overcoming these challenges requires and demands that all these stakeholders link, coordinate, and integrate their efforts as a single cohesive critical mass, pooling, leveraging, and sharing their resources, within local, national, and international regional public/private partnerships, in the pursuit of housing initiatives of common interest and benefit to all.

Signed, on behalf of
all conference participants,

Antonio B. Mendoza (Dominican Republic)
CHAIRMAN

Joseph A. Bailey (Jamaica)
SECRETARY GENERAL

August 19, 2006