

OVERVIEW
OF THE
SOVIET HOUSING SECTOR

December 1991

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OVERVIEW OF THE SOVIET HOUSING SECTOR

1 INTRODUCTION AND EXECUTIVE SUMMARY

1.1 Introduction

The Soviet Union finds itself at a historic juncture in its development. The aborted August 1991 coup dramatically enhanced the possibility and acceptability of reforming its centrally planned economies, and has invigorated the process of economic transformation. For the housing sector, long a source of major social, economic and political problems, the ramifications are great. The following "desk top" study, a description and analysis of the Soviet housing sector, will facilitate AID's long-range objectives of providing assistance, in concert with other bilateral and multilateral donors, in support of durable democratic institutions and the transformation to market-oriented systems.

The Soviet housing sector embodies many of the contradictions that have emerged due to economic restructuring as entrenched ideology and traditions clash with new ideas and change. Turf battles are presently being waged in city councils at the municipal level throughout the country, as well as in the parliaments of the independence minded republics. As each strives to achieve consensus over the direction, timing, and pace of new initiatives, it is clear the inexorable process of democratization is well under way.

This study describes and evaluates the various components of the housing sector and related infrastructure, analyzes recent reforms and enabling legislation, identifies the most pressing obstacles to reform, and concludes with suggestions on priority areas for technical assistance. At the request of the Office of Housing and Urban Programs, an outline of this technical assistance program is provided under separate cover. Finally, an extensive bibliography and a list of individuals contacted is provided in the annexes.

It should be noted that events in the Soviet Union are unfolding rapidly, and in many areas documentation is either obsolete or non-existent. In the USSR, numerous actors at the republic and local levels are grappling with the challenges of transformation, while at the same time debating options for independence and autonomy. In this changing environment, it is difficult to be definitive. In the newly independent Baltic republics, for example, the issues of privatization, ownership of land, and housing are currently under discussion in parliament, while the Soviet republics, such as the Ukraine and Byelorussia, though still attached to the crumbling Union, are focused quite seriously on upcoming referendums on full independence. Indeed, it is presumptuous at this point in time to refer to the region as

the Union of Soviet Socialist Republics, or USSR, which we use here loosely for the sake of convenience.

Finally, an important caveat is included with respect to rates of exchange between US dollars and Soviet rubles. While an exchange rate of US \$1 to 6 rubles, currently the commercial rate, is used in this study, these numbers should be treated with caution. Multiple exchange rates are in effect, each vastly different by orders of magnitude. Other rates available include the tourist rate of US \$1 to 47 rubles, up from a previous rate of US \$1 to 32 rubles, and the black market exchange rate, which currently stands at US \$1 to 50-60 rubles. Additionally, rapidly accelerating inflation has made monetary aggregates less meaningful in the current circumstances. Recent estimates of inflation reach several hundred percent per year.

1.2 Executive Summary

This Executive Summary highlights the principal findings and conclusion of a "desk top" study of the Soviet housing sector. Prior to this discussion, however, the present section updates the reader regarding the most recent reforms that have occurred in the sector. Many of these reforms, some as recent as the failed August 1991 coup attempt, have enormous potential for supporting efforts to transform the Soviet housing sector into a market-oriented system. Recent reforms include:

- Restrictions on private ownership of property have been greatly reduced or relaxed, while the system of residence permits has been abolished;
- The investment process for housing finance has been increasingly decentralized, which has enormous implications for municipalities involved in the delivery of housing, as well as potential homeowners;
- The 1988 decree to accelerate the development of private housing construction offers increased opportunities for both urban and rural households to build new housing or improve their existing housing conditions;
- Privatization of state-owned housing has already begun—37,000, 211,000, and 127,000 units were sold in 1989, 1990, and the first six months of 1991, respectively.

1.2.1 Existing Housing Stock

The following points summarize the key indicators of the Soviet housing stock.

- Performance of the Soviet housing industry has historically been evaluated and rewarded by government in terms of space provided and the number of units produced;
- Eighty-five percent of approximately 90 million Soviet households resided in "self-contained" versus communal housing units (1990);

- Ratio of households to housing units has increased since 1980, and currently stands at 1.17 households per housing unit;
- Almost 33% of Soviet households do not enjoy even the modest all-union "sanitary norm" of 9 meters per person;
- While more than 70% of the Soviet housing stock has been erected since 1960, the rate of housing retirement has been growing over the last five years due to the particularly poor quality of housing built in the late 1950's and early 1960's;
- Almost 2% of the housing stock was considered dilapidated and in need of emergency repair in 1989;
- More than 55% of the housing stock does not have access to a full range of public services (i.e., sewerage, potable water, central heating and hot water); this figure is close to 90% in rural areas;
- Housing space produced in 1989 was almost 23% greater than in 1980; however, 1990 production decreased to 1.8 million units, representing a decline of 340,000 units compared to 1989 and the lowest level of output since 1986;
- Large panel construction (LPC) totaled 50-55% of all state-financed housing in urban areas during the 1980's;
- Three major types of housing ownership in the USSR (1990) are state, cooperative and individual (private); state ownership dominates in the cities (72.3%), while private housing is prevalent in rural areas (69.8%); cooperative housing constitutes a relatively small share of the total (5.7% urban versus 0.2% rural);
- Although mandated responsibility in 1957, municipalities controlled less than half of urban and just over 5% of rural state-owned housing in 1990 (ministries and enterprises have maintained control of the rest);
- Approximately 8 million people, often including entire families, lived in enterprise- and ministry-run worker hostels in 1989; and
- Until recently, construction of private housing was prohibited in cities of over 100,000.

1.2.2 Institutional Framework for Housing Production and Management

The allocation of functions and responsibilities within the Soviet housing sector among the union, republic and local levels of government is in a state of flux. The importance of the union government, particularly the union ministries, has been rapidly declining since early 1990. Even prior to the failed August 1991 coup attempt, the majority of policy and planning decision-making had passed to the republic level of government.

Currently, most urban housing is still designed and built by state design bureaus and construction enterprises, respectively. Until recently, the major part of financial resources for construction has been appropriated by the central government, while the actual contract-

ing and oversight of housing construction, as well as management of the existing housing, has remained the responsibility of the local entities, including local government and state enterprises. The executive committees of the local councils are playing an ever increasingly important role with respect to the provision of housing.

This chapter attempts to trace the evolution in the allocation of housing sector responsibilities among the three levels of government in the areas of policy and plan formulation, financing, regulatory framework, production, maintenance and cost recovery.

1.2.2.1 The Overall Planning Process for State Housing Construction

Until the demise of the union ministries, all state housing construction took place in accordance with the plans of economic and social development of the USSR. State housing construction was carried out directly through centralized allocations of investment resources, and indirectly through the internal funds of the state enterprises. With respect to housing, priority in centralized investment allocations was given to the construction of workers' housing for the new enterprises and in newly developing regions.

1.2.2.2 Regulatory Framework for the Planning of the Soviet Cities

Zoning of Soviet cities takes place within the framework of the so-called General Plan of the City which is formulated by the municipal authorities. The General Plan outlines the directions of a city's long-term development including the approximate volume of new construction requirements.

Planning for the development of Soviet cities, and the private sector's potential role in that development, is viewed problematically for the following reasons:

- no coherent guidelines for city development exist in the USSR;
- cities do not have adequate staff to elaborate nor review development plans and often contract with special agencies in Moscow or St. Petersburg, which have almost no knowledge of local circumstances;
- adequate demographic and economic data are usually not available to city planners nor construction enterprises;
- completed plans are often not implemented due to the municipalities' lack of investment resources and political authority over the industrial enterprises and other agencies;
- enterprises and agencies contract for housing construction according to their own priorities often disregarding the General Plan and the existing city infrastructure;
- acute shortage of housing and lack of resources for resettlement prevent the cities from tearing down existing obsolete dwellings, thereby pushing new urban development onto the periphery.

1.2.2.3 Design of Housing and Control of Standards

The design of housing is usually performed by central design bureaus subordinate to the State Committee on Architecture. In larger cities such as Moscow, the entire construction complex (design and construction) may be subordinate to the city council. Often there is no competition in design and little consideration given to alternative designs for projects. Cooperative and private consumers of housing, like municipal authorities and state-owned enterprises, usually use standardized housing designs. In the late 1980's, the government permitted the formation of housing design cooperatives, but little information is currently available on their activities.

1.2.2.4 Land Use Practices

Land use practices in Soviet cities have not been motivated by a desire to allocate land to its best and most cost-effective use. Land has been treated as a free commodity with no inherently different values for central versus peripheral locations. Thus one finds obsolete factories with extensive storage yards near the center of most towns, occupying land that would be better used for housing or service functions. Opportunities for more intensive and rational land use are foregone. As a result, vast tracts of prime urban land are wastefully tied up with inefficient and inappropriate land uses.

The above scenario underscores the lack of functioning land markets. At this point, Soviet cities are beginning to address the absence of land markets. According to the existing law, all land in the USSR is a national property. In other words, the law still does not permit full private ownership of land. The law on land reform passed in late 1990 allowed private farmers a limited ownership of land (farmers can "own" land but cannot resell it to another individual). Further land legislation is being prepared in the Russian parliament, but at present it is not clear what degree of private ownership will be permitted. While significant resistance to allowing relatively free trade in land by individuals persists, the recognition of the necessity of land markets is growing. Without such systems in place, land cannot be allocated or developed efficiently.

Full private ownership of land is not necessarily the only solution. Some suggest that municipalities make use of leaseholds and charge rents on a percentage of the current market value. This has the advantage over sales by permitting the municipality to correct initial errors in valuation that may frequently occur, given the lack of information on land values. A forthcoming Russian Republic decree on housing construction apparently will not address land ownership issues.

1.2.2.5 Infrastructure and Supporting Facilities

The construction and maintenance of infrastructure (utilities, utility lines, access roads, public transportation) is the responsibility of either local authorities or enterprises. Utilities and other infrastructure for housing construction cooperative (HCC) projects are the responsibility of the city councils. Both city councils and state enterprises, however, tend to neglect the development of infrastructure for housing. Construction of actual housing space has historically been considered more important than the adequate provision of supporting infrastructure.

1.2.2.6 Management of Housing

Management of state-owned residential housing is performed by either the local executive committee of the local council or by the enterprise which financed the construction. Cooperatives and private individuals manage their own housing. Utilities, however, are usually under the control of the city council. Enterprises and organizations which own housing often manage some of the utilities servicing the housing under their control.

1.2.2.7 The System of Housing Allocation

The following sections describe the allocation process for state-owned, cooperative and privately-owned housing.

1.2.2.7.1 State-Owned Housing

State-owned housing is highly subsidized by the Soviet state. High subsidies combined with the relatively insufficient size of the housing stock result in large and persistent excess demand for state-owned housing. This necessitates the employment of formal, non-price rationing mechanisms such as waiting lists. The waiting lists are managed by the executive committee of the city or district council, in the case of municipal housing, and by the enterprises in the case of departmental housing.

The officially proclaimed criteria for placement on a waiting list are based mainly on the "genuine need" for improvement in a household's living conditions. Normally, the "genuine need" applies when a household has access to less than 7 square meters per person. The limit is higher for the residents of communal apartments. The occupants of dilapidated housing are also eligible to join a waiting list. Some categories of citizens such as war veterans, the handicapped, "heroes of socialist labor" and the like have privileges allowing them to bypass the regular waiting list (they form a list of their own). Criteria for being put on a waiting list for housing differ among the individual cities and republics.

1.2.2.7.2 Cooperative Housing

To a large extent cooperative housing is supposed to be allocated on the basis of the ability to pay. The prices of cooperative housing, however, are based on official wholesale construction costs and do not represent true market clearing prices. In addition, the state subsidizes the construction of cooperative housing through low interest rate loans. This results in queuing for cooperative housing as well. As of January 1, 1988 the number of people on cooperative waiting lists reached 1.5 million. Many of these people (36.5% in the Russian republic alone) were also on waiting lists for state-owned housing. At the present rate of cooperative housing construction, it may take up to ten years to provide cooperative housing for every person waiting for it. Moreover, households must meet certain "need" criteria to qualify for cooperative housing, which implies that when such requirements are lifted, as is proposed, more people are going to join the queue.

1.2.2.7.3 Privately-Owned Housing

The allocation of private housing normally takes place on a market or second economy basis. The primary non-market element impacting the allocation of privately-owned housing concerns the allotment of building plots. The priority for building plots is given to those on waiting lists for housing improvement, especially employees with distinguished work records, retirees, war veterans, and the physically handicapped. Preference is given to those households which transfer their state-owned accommodations to the local council in exchange for a privately-owned house. Generally, though, the allocation of private housing is based mostly on the ability to pay. Obstacles to the private production of housing include the lack of access to construction materials and skilled labor, and poor supporting infrastructure.

1.2.3 Housing Finance and Financial System

Most housing construction in the USSR is still financed by the state. In 1989 the direct investment by both the state and state enterprises comprised 77% of the total investment for housing. Public organizations such as trade unions, housing cooperatives, individuals, and collective farms provided the balance.

Since the beginning of 1991 the Soviet government has tried to limit the role of central budget financing to only those projects of special importance for the entire economy. To this end, the government created the Fund for Economic Stabilization which was supposed to be the only source of centralized investment financing.

1.2.3.1 Direct Investments from the State Budget

Direct investments from the state (i.e., union) budget have been the primary source for housing construction in the past. These investments, in turn, were managed by the city councils or state enterprises. The state disbursed financial resources to the councils which contracted for construction with builders. Historically, central budget allocations have also gone to enterprises and organizations which may or may not supplement these appropriations with internally generated funds.

The breakup of the union ministries has had a dramatic impact on the Soviet housing financing system. The recent virtual disintegration of the Soviet Union has all but eliminated traditional central budget sources with the exception of monetary emission and some foreign trade income. For this reason, centralized investments will no longer play a significant role in housing construction. It must be mentioned that the role of the central budget in housing financing has been rapidly declining since early 1990. Even prior to the August 1991 coup attempt the bulk of state financing had been channelled through budgets of state-owned enterprises. Nonetheless, some centralized investments in housing remained until very recently. Presumably, at the present time the functions which used to be performed by the central government budget have shifted to the republic budgets. Since the republic governments will no longer transfer resources (taxes and enterprise profits) to the union government, they cannot expect to receive sizeable centralized budget allocations for housing from the center anymore.

Local government has also received a greater authority to introduce local taxes and to determine the patterns of spending of the resources available to them. The cities also have acquired the power to influence the housing plans of the enterprises located on their territory. Finally, recent republic decrees authorize municipal authorities to receive a major portion of the proceeds from privatization of state-owned housing. In most cities these proceeds are supposed to be spent primarily on construction of new state-owned housing.

1.2.3.2 Enterprise Funds

State-owned enterprises and organizations finance their housing construction from two sources—directly from the state budget and from the funds accumulated out of their retained revenues. As long as these enterprises are state-owned their internal funds should be considered as part of overall state financing. Nonetheless, with the increasing autonomy of Soviet enterprises and organizations, and particularly the prospect of their privatization, the immediate source of financing acquires special importance.

Recently, the most important development in the pattern of investment financing in the country as a whole has been the decentralization of the investment process. With respect to state financing of housing construction this implies a greater emphasis on enterprise funds

at the expense of central investment allocations. While 52% of all housing space in 1988 was financed directly from the state budget, only 31% was targeted to receive centralized financing in 1990. During this same period the share of housing financed from the funds of state enterprises increased from 17% to 36%. The ramifications of this shift in financing indicate a greater role for local constituents, such as enterprise workers and consumers in general, in setting investment priorities.

1.2.3.3 Housing Cooperatives

Historically, cooperatives have received little funding, given the higher priority placed on other housing investment. Lately, a significant role in solving the housing shortage has been assigned to the HCC's, though in 1989 cooperative construction still accounted for only 6.1% of the total construction of housing in the USSR.

1.2.3.4 Individual Private Construction

Private housing construction takes place on a much smaller scale than the state-owned housing construction, and accounted for only 18.4% of all housing construction in 1989.

The regulations on the financing of individual housing construction were significantly changed by the Soviet government in a February 11, 1988 decree entitled "On the Measures to Accelerate the Development of Individual Housing Construction." According to this decree, urban residents can obtain up to 20,000 rubles for 25 years for a new house and up to 3,000 rubles for 10 years for improvements and reconstruction. In both cases the payments start in the third year. Urban residents can also obtain up to 20,000 rubles for 25 years for the purchase of an existing home. Here payments start in one year. The interest rate is 2% annually for rural residents and 3% for urban dwellers. Physically handicapped individuals, veterans of World War II, and survivors of military personnel killed in action pay no interest on these loans. No independent confirmation was possible regarding the extent to which loans to private individuals are being made in urban areas.

1.2.3.5 Cost Recovery Mechanisms for the Maintenance of State-Owned Housing

The Soviet system of rents in state-owned housing has remained essentially the same since 1928. In those days rents were differentiated according to household income, but wage inflation over time has eliminated most rent variations. The basic monthly rent is either 13.2 kopeks or 16.5 kopeks per sq. meter (10.76 sq. ft.), depending on the size of the city (100 kopeks equal one ruble). Rentals do not take into account location inside the city or the quality of housing. The only exception is the rent charged for occupancy in high-rises, which is set at 30 kopeks per square meter (US \$0.05). Rent is charged only for "living space," which excludes kitchens, bathrooms, and other auxiliary areas. Households which have more than 12 square meters per person (plus 6 square meters per family) have to pay triple the

usual rate for the excess space. The average monthly rent per square meter reached 1.59 rubles in 1988.

1.2.4 The Construction and Building Materials Industry

Since the first five-year plan in the late 1920's, the Soviet economy, by international standards, has been characterized by an unusually high rate of investment in the housing sector. Traditionally the share of construction and installation expenditures in Soviet capital investments has exceeded 50%. Naturally, the Soviets have had to create a large construction industry in order to support this investment program.

Since 1990, however, the volume of investments in the USSR in the housing sector has been declining and the performance of the construction industry has deteriorated. This decline is the end result of an industry that is characterized by large, monopolistic state-owned enterprises, an inefficient reward system, obsolete equipment, shortages of skilled labor and little technological innovation. Projects typically suffer long delays and are of poor quality, with a large number left unfinished due to the fragmentation of resources among too many projects. Together with the entire Soviet economy, however, the construction industry is undergoing a process of structural reforms aimed at helping the industry overcome these problems and improve performance.

The main trends in the Soviet construction industry are the increasing decentralization of investment, the decline of the state-owned construction enterprises, and the growth of the cooperative sector. In recent years, the construction industry has experienced a proliferation of institutional and administrative changes and the adoption of numerous new laws and regulations designed to make the industry more market-oriented.

Housing, as a sub-sector of construction, accounted for 16.5% of all capital investments in 1989. The housing industry shares all the problems of the construction industry in general. It should be emphasized, however, that the housing industry stands to be the primary beneficiary of the construction industry's trend toward decentralization, the investment shift toward the non-productive sector, and the introduction of market-oriented reforms.

1.2.4.1 Structure of the State-Owned Construction Industry

Traditionally, the administrative structure of construction in the USSR has been quite complicated and has historically experienced less stability than most other sectors of the economy. Until recently, the Soviet Union's construction industry was overseen by a supra construction ministry or committee (GOSSTROI). This ministry was divided into a number of operating branches or contracting construction entities (*podriadnye*): (1) "trusts" or "associations"; (2) "construction-installation administrations"; (3) "*kombinats*" (usually for

housing construction); and (4) "production and technological acquisition administrations" (*upravlenie proizvodstvenno-tekhnicheskoi komplektatsii*).

Since the mid-1980's the Soviet government passed a number of decrees affecting the administration of the industry. The main goals of these decrees included the following: 1) relieving the central authority of micro-management and increasing the autonomy of construction enterprises; 2) strengthening the role of contract or negotiated prices (*dogovornye tseny*); and, 3) increasing the mutual responsibility of all participants in the project for achieving the final results.

Until 1986 the main federal administrative organ in construction was the State Committee on Construction Affairs. In 1986 it was transformed into the Union-Republic State Construction Committee (Gosstroj USSR), and given the status of a subdivision of the Council of Ministers of the USSR. Its responsibilities included administration of the activities of the union and republic construction ministries, coordination of the Gosstrois of the republics and the autonomous republics (established in 1962-1965), and implementation of unified technological policy and improvements to the system of incentives in the construction sector. The importance of Gosstroj USSR was underlined by the appointment of a Deputy Chairman of the Council of Ministers of the USSR as its director. However, due to the union government's trend toward decentralization, in 1988 Gosstroj lost much of its importance and was transformed into a committee on norms and technology without any responsibility for directing the activities of the various ministries with responsibility for construction.

Until recently, the bulk of the state-owned construction industry has been managed by various ministries organized according to either the type of construction they perform, or by the region where they operate, or by the major project they work on. Almost all of these ministries, especially at the union level, have been disbanded in the last 2-3 years. In addition to the union ministries that previously engaged in construction, there are also contracting construction organizations subordinated to the executive committees of the local councils (municipal authorities), contracting organizations of various branch ministries and administrations. The combined total of local and ministerial contracting (*podriadnye*) construction organizations account for 90% of the construction volume in the USSR.

A significant number of construction organizations—mainly in the area of housing and other consumer oriented construction—is subordinated to the executive committees of the local councils (municipal authorities). The largest cities have "main construction administrations"—umbrella organizations for the housing contracting construction organizations. Some of the largest are Glavmosstroj and Glavmosinzhstroj (Moscow), Glavleningradstroj and Glavleninzhstroj (Leningrad/St. Petersburg), Glavkievgorstroj (Kiev), Glavtashkentstroj (Tashkent), and Glavmosoblstroj (Moscow Province).

There are also approximately 550 technically obsolete and inefficient enterprises (housing construction *kombinats*) utilizing large panel construction technology in the production of building materials. Often times, these *kombinats* are involved in actual construction as well. These enterprises have an annual production capacity of 689 million sq. ft., which accounts for almost 60% of state housing construction (70% in the cities).

1.2.4.2 Current Practices of Construction Contracting

Recent changes in the Soviet construction industry have reduced the role of central planners, while strengthening the importance of the negotiated contract between construction enterprises and clients. The construction contract agreement (*dogovor podriada*) has become the main legal document regulating the actions of involved parties, prescribing rights and responsibilities, and (together with existing laws) the punitive measures for inadequate or incomplete performance.

1.2.4.3 The System of Rewards in the Construction Industry

Due in part to an incentive structure which rewards gross volume output, the Soviet construction industry is plagued by unfinished projects, high costs and a low rate of labor productivity. The existing system of rewards creates strong incentives to produce homogeneous products on a mass scale, and to resist innovations in design and technology. With this system, construction enterprises are interested in taking on more expensive projects and have little incentive to minimize costs. Frequently, it is advantageous to use costlier methods because the rewards are correspondingly higher. In the past, cost overruns often did not present a major problem for the contractor, since the client, being a state entity, could request additional resources from the state budget to cover project cost overruns.

1.2.4.4 Quality of Workmanship

The local monopoly position of the construction enterprises, combined with the acute shortage of housing and the perennial fixation on "fulfilling the plan", contributes to the notoriously poor quality of Soviet housing. Future tenants of state-owned housing have only a limited input in the acceptance of the finished unit. Municipal authorities who serve as the client are not particularly interested in the quality of workmanship. Not surprisingly, the quality of units produced for enterprises or for housing cooperatives, whose members themselves are prospective residents, is significantly better than that of housing built for municipalities.

1.2.4.5 Construction Costs

It is difficult, for a number of reasons, to evaluate real increases in Soviet housing construction costs over the years. The reward structure of the construction industry and the accommodating behavior of state-affiliated clients are partially responsible for the rapid increase of housing construction costs in the USSR. Despite steady growth over the years, Soviet wholesale construction prices have remained significantly below market-clearing levels. This situation has been somewhat alleviated by a dramatic wholesale price increase in early 1991 when the cost of 1 square meter of housing went from 260-300 rubles to 900-1000 rubles (in official prices). Despite this steep climb, official costs continue to be well below the per square meter prices reflected in the bids at private housing auctions.

1.2.4.6 The Building Materials Industry

The Soviet building materials industry is a critical element in the housing construction process and determines its production potential. At present, severe shortages exist in the Soviet Union for virtually all types of basic construction materials such as cement, non-metallic (*nerudnye*) wall materials, various prefabricated construction components (*sbornye konstruktsii*), and bricks. The immediate reason for shortages is, of course, the imbalance between state prices and the available financial resources of the construction enterprises.

There are, however, additional factors which exacerbate the situation. First, Soviet workers and managers lack incentives to be careful and frugal during the transportation, storage, and usage of the construction materials. Second, the existing system of rewards provides strong incentives for both architects and builders to use the greatest amount of construction materials in designing and executing projects. Third, the large volume of mothballed designs and shut-down construction projects in the USSR prevents the use of valuable materials in other, possibly more important, projects. Fourth, there are strong incentives for project management to hoard the most critical, shortage-prone construction materials and equipment for other purposes, such as barter transactions. Fifth, in addition to a low aggregate price level, incorrect relative prices increase shortages of some construction materials compared to others.

Besides the factors listed above, the shortages of construction materials are exacerbated by the stagnation of the construction materials industry which has been growing at close to a zero rate over the past ten years. The main reason for this slow growth is the small volume of capital investments in the industry. This has resulted in excessive obsolescence of fixed assets and a low technological level of production. Even those investment funds that are earmarked for the expansion of the construction materials industry are constantly underutilized due to the lack of the physical and administrative capacity of the responsible implementing ministry.

1.2.5 Private Sector Participation in Housing Production

Since the mid-1980's, Soviet leaders have recognized that the housing problem could not be solved without an active participation of the private sector. The recent dissolution of the central authority in the Soviet Union has led to a precipitous decline of the state sector in the economy. Currently, the very economic survival of the former Soviet republics depends to a large extent on the ability of the private sector to provide a viable alternative to the disintegrating state sector.

While the growth of private enterprise in the USSR has been encouraging, the private sector remains relatively small and continues to be plagued by serious problems which undermine its potential. These problems include :

- the short-term orientation of entrepreneurs due to political instability in the country and the unpredictability of the future legal environment and taxation rules;
- the large discretion of the local authorities in the implementation of the existing legislation and licensing of private sector activities;
- the instability of the financial system, inconvertibility of the ruble, and an accelerating inflation rate;
- the generally underdeveloped nature of capital and financial markets;
- the lack of the essential business skills (e.g. accounting) and business culture in the country;
- the poor state of the country's physical infrastructure.

These problems seriously impede the development of the private sector in housing construction, already a relatively lengthy and capital intensive process. On the other hand, the acute housing shortage in the country and the perception of housing as a hedge against inflation create strong demand for private construction services.

1.2.5.1 Construction Cooperatives

While state-owned construction enterprises are reducing their output, construction cooperatives have been growing in number and importance. At the end of 1990 there were 75,522 active construction cooperatives employing 2.5 million people including part-timers. The construction cooperatives were the most common and the fastest growing type of cooperatives in the USSR in 1990. Their number in that year almost doubled (in 1988 there were only 1,800 construction cooperatives). Construction cooperatives volume reached 25.96 billion rubles (US \$4.33 billion), leaving all other types of cooperatives far behind. Construction cooperatives produce mainly for enterprises and public organizations. This tendency can be explained by the fact that state-owned enterprises are able to help the cooperatives to procure construction materials and transport.

In 1989 in order to protect themselves from the arbitrariness of the authorities and to improve coordination of their activities, construction cooperatives organized the Union of Construction and Industrial Cooperatives of the USSR (UCIC USSR). The union is a legal entity whose primary responsibilities include: (1) defense of the rights of its members; (2) help in training the cooperative labor force; (3) exchange and dissemination of technological information; (4) organization of cooperative foreign trade activities and joint ventures; and, (5) development of its own construction materials industry to provide crucial inputs for its members. As noted previously, this last task is particularly important due to the poor performance of the Soviet construction materials industry.

1.2.5.2 Commodity Exchanges

Emerging commodity exchanges constitute a vital element of free market infrastructure in the Soviet private sector. Their importance is enhanced by the breakdown in the state supply system. While the importance of commodity exchanges grows rapidly, no systematic information about them is currently available.

The distinctive feature of the Soviet exchanges is that buyers expect immediate delivery of purchased goods. In this sense the exchanges operate more like an auction rather than a western-type commodity exchange. The work of the exchanges, handicapped by the inadequate communications system, is not as efficient as it could be.

1.2.5.3 International Joint Ventures

Many joint ventures between foreign, and specifically US-based companies, and Soviet counterparts are coming on line, but their role in local housing construction has been limited. Of those housing projects currently underway, the majority are exclusive international housing developments catering to expatriates working with multinational corporations in the Soviet Union. Generally, leasing a unit in these projects requires payment in convertible foreign currencies. The text highlights several foreign-Soviet joint-ventures organized for the production of housing and building materials.

1.2.6 The Informal Sector

The informal sector plays a vital role in the overly regulated Soviet economy, where even now the state attempts to control most prices and where until only recently most private economic activities had been prohibited. Without a large informal sector the Soviet economy would have collapsed many years ago. In the past, informal economic activities alleviated mistakes of the central planners, coordinated a significant share of microeconomic activities, and allowed individuals and organizations to circumvent the bureaucratic red tape. For the foreseeable future, informal contributions to the Soviet economy in general, and to housing

in particular, will remain crucial for understanding the workings of the system, and the progress and effects of reforms.

1.2.6.1 Housing Construction and Repairs

Like in many other countries, the Soviet construction sector has always attracted a significant portion of informal economic activities. For years, thousands of private contractors known as *shabashniki* have been building houses, roads, farm buildings, and other structures. *Shabashniki* usually work in teams of 3-9 people, earning 3-4 times as much as they do in their state sector jobs. Some also take payment in-kind. Most of the work *shabashniki* perform is under contract with collective and state farms, but sometimes they work for individuals as well. Even though a legal contract may be present between the customer and a representative of the *shabashniki*, the *shabashniki* team itself would not, as a rule, be a legal entity.

One of the greatest difficulties experienced by *shabashniki* as well as by officially registered construction cooperatives, is procuring construction materials. Often the only channels for obtaining crucial inputs are through begging, bribing, or stealing. The legal commodity exchanges are underdeveloped, and are not accessible to many construction outfits, particularly to *shabashniki*. Black markets in construction materials are widespread. Prices in these markets vary across regions and normally exceed the official prices several fold.

1.2.6.2 Housing Allocation

The second economy also plays an important role in allocation of housing, including state-owned, in the USSR. Even prior to current reforms, Soviet households managed to bypass the strict rules of housing allocation and obtain the amount of housing corresponding at least to some extent to their monetary wealth. The informal mechanisms for achieving this goal included side-payments during exchange of apartments, bribes to housing allocation officials, and renting housing from private individuals when the amount of rent exceeded the legal limit.

Another mechanism for improving one's housing situation through informal means is renting a dwelling from private individuals. Soviet law has always allowed renting one's housing unit. Until recently, however, it had been prohibited to extract profit from such an arrangement. Also, the system of *propiska* (residence permit) has imposed significant restrictions on private rentals. While less than 1% of Soviet families were officially renting their housing from private individuals, the true size of this phenomenon is surely much greater. In addition, even those who are officially registered as renters almost certainly have to pay large premia over the officially listed rental charges.

1.2.7 Framework for Housing Reform and Priority Areas for AID Technical Assistance

This final chapter presents the outline of a broad framework for the mid- to long-term reform of the Soviet housing sector.

A joint IMF-World Bank *Study of the Soviet Economy* proposes four principal areas for reform of the Soviet housing sector: (1) property rights and privatization; (2) rents, sale prices and subsidies; (3) housing finance; and, (4) housing production and delivery. The IMF study notes that housing reform is an important component of overall macroeconomic stabilization and structural change. It cannot proceed separately, but must be integrated with reforms in other parts of the economy. The report goes on to state that reform of the housing sector must deal simultaneously with both the existing stock and new production. The text briefly summarizes the principal elements of a framework for the reform of the Soviet housing sector as set forth in the IMF document.

2 HISTORICAL BACKGROUND

By the turn of the century, urban housing conditions under the Czar in pre-Revolutionary Russia ranked among the worst of the modern world. A 1912 census of St. Petersburg and Moscow found eight occupants per apartment, compared to 2.7 in Paris. In most cities, sewage systems were unknown, and water systems served less than 10% of the population. Central heating was a luxury for the very few. The average living space per urban dweller at the time has been estimated at seven square meters, two meters less than the currently recognized Soviet sanitary standard of nine square meters. For workers, housing was often a bunk in a shack-dormitory attached to a factory. These dank, dark hovels, lacking basic sanitation facilities, provided a breeding ground for disease, despair and eventual revolution.¹

2.1 The Bolshevik Revolution

Lenin called for "peace, bread and land" in 1917 and proposed that apartments of the rich be requisitioned for worker housing. One of the first acts of the Second All-Russia Congress of Soviets was to adopt the Decree on Land of November 9, 1917, the first step towards the nationalization of all land and the "municipalization" of many urban dwellings. On August 20, 1918, the Decree on the Abolition of the Private Ownership of Urban Real Estate was ratified, which allowed for the living quarters of "non-working" individuals, classified as "bourgeois parasitic elements", to be confiscated. Those to be evicted often lost most of their personal possessions as well. Approximately 1,000,000 persons in Moscow and Leningrad improved their living conditions under this initial redistribution.

Under the 1918 act, all municipal land was placed under the control of local councils. Cities with more than 10,000 inhabitants "municipalized" all dwellings whose value and size exceeded a minimum defined by each local Soviet. The right to build in such municipalities was declared the sole right of the local authorities. With this law, private ownership was abolished and many privately-owned houses were nationalized, creating a state monopoly over the construction of all new housing, control over all land and the management of its housing stock.

Confusion resulted over the mass evictions and shifting residents. Vindictive "house management committees" were placed in charge of assigning housing. Urban residents, unsure of their housing rights, became indifferent to maintenance needs and over time, capital housing repairs were ignored. The dwindling number of private homeowners who still retained ownership to their dwellings became increasingly reluctant to maintain their

¹ See Chapter 2 in Alfred DiMaio, *Soviet Urban Housing: Problems and Policies*, HUD, 1974, for a full discussion of Soviet housing in historical perspective.

property as well. Between 1917 and 1923, the private housing sector, comprising more than three-fourths of the entire housing stock, remained unmanaged, leading to the rapid deterioration of many residential buildings.

The housing stock suffered additional damage when workers, who were moved into large homes that had been confiscated, tore up timber framing, wood flooring and trim for stove fuel, and ruined the plumbing with which they were unfamiliar. The result was a dramatic reduction in the amount of available housing. The total number of dwellings in Petrograd, for instance, declined from 225,987 in 1910 to 192,146 in 1920, while Moscow lost one-fourth of its housing stock in the first five years of the Revolution.

Despite this decline, the government strived to achieve an ultimate goal of providing free housing for all. A July 1919 law froze rents, and provided subsidies for those who could not afford their rents. Wages were partly paid in-kind in the form of living quarters by state enterprises. On January 1, 1921, all rents were abolished, yet at the same time many cities saw a sudden influx of newcomers seeking jobs in state factories and the return of urban dwellers who had fled to the countryside during the Civil War and Intervention.

Seven months later another law was introduced to encourage repairs, stipulating that costs of such repairs could be charged to the tenant. Unable to cope with growing demand, the Soviet government turned to its citizens for help through the promulgation of a decree "On Cooperative Housing" on August 19, 1924. This two-fold policy encouraged house building and house management "on the principles of self-help of the toiling masses" through voluntary cooperative societies. Two types of house construction cooperatives (ZhSKT) were allowed, as well as a house leasing cooperative (ZhAKT). In addition to cash payments, association members could pay for their shares with construction materials and labor.

By the early 1930's, however, cooperative housing fell into official disfavor, since it seemingly promoted "individualist tendencies" of cooperative management boards over the interests of the state. In 1937, the ZhAKT were abolished, and all buildings with outstanding government loans were transferred to either the administration of local councils or enterprises which initially funded these ventures.

The government slowly realized that rents would need to be reintroduced to cover the costs of housing production and management. In 1926, an all-Union rent law was adopted, yet rates were so low that heavy government subsidies were still required. Under the New Economic Policy (NEP) of the time, policies of "denationalization" and "demunicipalization" were carried out. Demunicipalization eased the chaotic housing situation by turning over housing to their previous owners on "leasing-management" arrangements. Within a few years, however, the government flip-flopped once again and unilaterally liquidated privately-held leases.

2.2 The Five Year Economic Plans (FYPs)

Several years later another effort was made to address the continuing housing shortage. A major decree, "On Housing Policy" of January 4, 1928, provided inducements of "preferential treatment" to attract private investment in housing. The decree promised limited government interference, the ability to set rents, and preferential tax treatment. These actions, however, were soon superseded by a series of ambitious Five-Year Economic Plans. These economic plans set the production levels and annual targets for housing, as well as other sectors in the economy.

The first Five-Year Plan emphasized rapid development of heavy industry, and paid very little attention to the country's housing needs. The ratio of expenditures for housing during the first, second, and third Five-Year Plans was only one-half that of the period from 1923 to 1928. From 1923 to 1940, available urban living space per person diminished 40 percent, from 6.45 square meters to 4.09 square meters, mostly due to in-migration from rural areas.

World War II took a terrible toll on the Soviet people and their cities, resulting in the death of about 25 million persons. The massive destruction of the war left six million buildings damaged, depriving an additional 25 million persons of shelter. Half the nation's housing stock was destroyed. Over 70,000 villages and 1,710 cities were demolished or burned. Following the war, some concessions were made to encourage private building, yet new laws during the Stalin era restricted private buildings to two stories and five rooms total. Between 1946 and 1956 some 300 million square meters of housing were produced, more than 50% of all pre-Revolutionary housing, but the housing problem remained acute.

2.3 The Khrushchev Years

In June, 1957 the Party adopted an extensive housing program aimed at eliminating shortages "within the next ten to twelve years". The 1957 "Decree on Developing Housing Construction" called for a 100% increase in the volume of housing to be produced during the 1956-1960 Five-Year Plan, and criticized the fragmented fashion in which housing was being developed as well as the shortage of construction materials.

The 1957 Decree also encouraged the organization of individual builders into housing cooperatives, which had been prohibited in 1937. The USSR Ministry of Finance was allowed to grant loans to "citizens jointly erecting multiple-apartment houses on the same terms that it grants to private builders," but stipulated that construction must be undertaken by "skilled contractors," which meant state construction enterprises, thus effectively eliminating private initiative. In addition, all construction cooperatives were limited to only employees of specific industries and enterprises; thus, citizens from different labor organizations or industries were prohibited from jointly forming a housing construction cooperative. Not surprisingly, housing cooperatives were slow to get off the ground.

An ambitious Seven-Year Plan (1959-1965) put forth by Khrushchev combined plans to invest 380 billion rubles in housing and communal construction in a massive effort to double the amount of urban housing within seven years. Emphasis was placed on industrialized construction and prefabrication to achieve the goals of the Seven-Year Plan, and indeed, a record number of units were produced. Notwithstanding regular reports of under-fulfilled housing plans and shoddy workmanship, the USSR ranked number one in the world in built apartments per 1,000 population for this seven-year period (DiMaio 1974).

In a search for new socialist ways to solve the housing problem, Khrushchev and the Party sought to root out a private property psychology by enacting a series of "anti-parasite laws". During 1961 and 1962 a series of confiscations of privately built homes and measures which restricted the availability of construction materials led to a sharp reduction in individual construction. Individual construction fell from 27 million square meters in 1960 to 16 million square meters in 1964. Despite its setbacks, the Seven-Year Plan represented a major effort to address the country's housing problem. Approximately one-half of the country's population, according to Soviet reports, moved into new apartments or improved its housing during this period. Still, significant shortages plagued the Soviet housing sector.

2.4 The Brezhnev Years and Beyond

At the Twenty-Third Party Congress, a new housing initiative was launched by Brezhnev to expand the volume of housing construction by 30% over the previous Five-Year Plan. With capital investments in housing pegged at 45 billion rubles, up from 35 billion in the previous FYP, 480 million square meters of housing were planned. Increased industrialized construction and increased productivity were emphasized in Congress reports and post-Congress articles, which focused heavily on the importance of off-site prefabrication of structural elements. By 1969 the output of prefabricated parts accounted for 50% of the total amount of structural elements used for large panel construction, increasing to 80% by 1970. Despite these efforts, first year production was off by 10 million square meters, and for the first time official announcements failed to reveal the exact amount of urban housing erected.

Housing cooperatives were promoted under the 1971-1975 Five-Year Plan, with appropriations of 78.5 billion rubles for housing, up 21.6 percent from the previous five-year period. Despite a plan to accelerate production, actual performance fell below yearly targets, due in part to the rapid urbanization of the country. In an eleven-year period from 1959 to 1970, the urban population increased by 36 million persons. Of these, 14.6 represented the natural increase in population, 5 million the transfer of formerly rural communities to urban status, and 16 million rural-urban migrants.

The grandiose promises of the Khrushchev administration that each family would be provided with a rent-free, fully-equipped apartment by 1980, thus ending the country's severe

housing shortage, were left unrealized. In 1981 Brezhnev noted the continuing prominence of housing in the social program, and oversaw the ratification of the "Principles of Housing Legislation" in the Supreme Soviet. Nevertheless, widespread shortages, exacerbated by a stagnant national economy, led to a continuing crisis in the housing sector.

Five years later at the Twenty-Seventh Party Congress, Mr. Gorbachev, speaking on "the social importance and acuteness of the housing problem", pushed for the adoption of dramatic reform-oriented ideas packaged in the "new" Party Program. Departing from previous ways of official thinking, the new measures called for the equitable distribution of housing, fair rents, and an increased contribution by the tenant population for housing improvements and repair. In April 1986 a new decree, "On the Principal Directions for Accelerating the Solving of the Country's Housing Problem", addressed the issues of unwarranted demolition, inequitable housing allocation, incorporation of the population's own income in home improvement, and streamlining the process of housing exchanges (Andrusz 1990).

For nearly seventy years, up through the continuing program of *perestroika*, the Soviet government has laboriously strived to meet the dual objectives of a separate dwelling unit for each Soviet family at a low rent. As Andrusz aptly points out, the first goal might be achieved at the expense of the second following the implementation of market-oriented reforms. In any event, it is clear, given the magnitude of the task, that introducing a market-based housing system on the inefficient, mismanaged, and often corrupt Soviet housing sector will be an enormous challenge.

3 CURRENT CONDITIONS AND RECENT REFORMS

The following chapters of this overview report will refer time and again to the fact that the institutional and legal apparatus for the provision of housing in what was the Soviet Union is in a state of flux. Numerous reforms are underway that directly address the chief problems affecting the Soviet housing sector. As the various republics struggle to achieve increased levels of authority—or indeed, actual independence as several upcoming republic-level referendums seek to accomplish in both the Ukraine and Byelorussia—the implementation of reforms has been neither consistent nor even clear. Prior to discussing in detail the various elements of the union-dominated Soviet housing sector that has been declining in importance for the past five years, this chapter briefly summarizes in one place the most recent reforms that have occurred in the sector (referencing the following sections to which these reforms apply), many as recent as the failed August 1991 coup attempt.

3.1 Recent Reforms

As noted throughout the text, a number of reforms have enormous potential in supporting efforts to instill a market-oriented system on the Soviet housing sector. Restrictions to private ownership have been greatly reduced or relaxed (see section 3.5.3), while the system of residence permits has been proclaimed unconstitutional (see section 4.7.4). In the area of housing finance, the investment process has been increasingly decentralized (see chapter 5), which has enormous implications for municipalities involved in housing construction, as well as potential homeowners themselves. The 1988 decree to accelerate the development of private housing construction offers increased opportunities for both urban and rural households to build new housing or improve their existing housing conditions (section 5.4). Existing obstacles to increased private sector participation, key factors such as the unpredictable legal environment, unstable financial system, and poor supporting infrastructure, are noted in chapter 7.

For the Soviet construction and building materials industry, recent changes have reduced the role of central planners, while strengthening the importance of the negotiated contract between builders and clients (see section 6.1). Additionally, the evolving official attitude toward informal sector activities—including the full formalization of some, such as authorized bidding and auctions—have served to empower the entrepreneurial spirit of Soviet citizens to improve their housing situations for themselves. Finally, new official efforts to support international joint ventures have the potential to effect a meaningful transfer of Western technological knowledge, building and construction skills, and efficient management systems (see section 7.6).

3.2 Property Rights and Privatization

Virtually all Soviet and western economists studying Soviet reforms agree that most of state-owned housing must be privatized. Privatization has already begun. The sale of state-owned apartments to their residents started in 1989 when 37,000 or 0.1% of all self-contained state-owned units were sold for a total of 164 million rubles (US \$27.3 million). In 1990 211,000 apartments were sold for 1.3 billion rubles (US \$217 million). During the first six months of 1991, sales exceeded 127,000 units generating about 676 million rubles of revenue (US \$113 million). In the Russian republic 26,684 apartments were sold during January-April 1991 for a total of 144.5 million rubles (US \$24 million). According to the Russian republic privatization law, the proceeds from privatization are deposited into the account of the entity which managed the privatized unit, i.e. either the city council, or an enterprise, or another public organization. The funds in this account are supposed to be used for future housing construction and major repairs of the local housing stock.

A privatization law was enacted in the Russian republic in July of 1991. According to this law, an apartment which has a minimum of 18 square meters of housing space per person, plus 9 square meters per household, is transferred to the household free of charge. (The local councils of people's deputies have the right to increase these minimum living requirements.) Citizens have to pay for the excess according to valuations made by special housing commissions. These valuations are supposed to take into account quality and location of housing.

Payments for privatized housing can be made over time by the homeowner. The councils of people's deputies can provide payment relief for certain categories of renters, such as low income families and pensioners. The households who have less than the minimum space may be compensated during the transfer of the apartment.² The proceeds from privatization are to be used for new construction and for major repairs of existing housing stock. The owners of the privatized dwellings are supposed to pay for the utilities and repairs according to the same fee schedules that are used for servicing state-owned housing.

The existing waiting lists have been preserved, and the old rules of eligibility for joining a waiting list remain in force. After obtaining a new apartment the renter can decide whether or not to privatize it. However, the same person can privatize an apartment only once. The rules for joining the cooperatives remained unchanged as well.

The decision to preserve the old waiting lists was motivated by the consideration of fairness to those households that have spent years waiting for their improved state-owned

²The Russian Republic privatization law involves giving each household more than the average square meter per person in the country (15 square meters) and hence may result in large cash payments from local governments to tenants, depending on the details of implementation.

housing allocation. At the same time it perpetuates the grossly inefficient system of housing distribution (see section 4.7). New housing allocations to households on waiting lists, however, will become more limited in the future. Some new housing built by the state is being auctioned off to the highest bidders.

The free of charge transfer of state-owned housing to the tenants has been criticized by several economists. Bessonova (1991) notes that while it is true that state-owned housing has been paid for by the population's taxes, such a transfer is inherently unfair. She notes, after all, everybody paid the taxes but only those who live in state-owned housing receive the benefits of free ownership. Bessonova asserts that this kind of privatization preserves the existing housing inequality and would even exacerbate it in the future. Others argue that free transfer does not help to reduce the state budget deficit.

The IMF (1991) contends that without rent increases there would be little incentive for the tenants to buy state-owned housing (see also Boiko, 1991). Rents have not been increased yet but most observers think that such an increase is inevitable. For this reason and because state-owned housing sells for a fraction of what housing costs in housing auctions, privatization is picking up speed, particularly in the Russia republic in such cities as Stavropol and Krasnodar, where the local authorities are trying to minimize the bureaucratic red tape associated with the process. In Moscow, new rules for privatization took effect in October 1991. On November 6, 1991, however, Mayor Popov of Moscow announced that in order not to adversely affect the family budgets of Muscovites on the eve of price liberalization, the privatization process will be modified. Privatization will be replaced by a free-of-charge transfer of ownership to the current residents. In the future, however, when the economy stabilizes, the housing owners will be assessed higher taxes for the "excess" housing space they acquired. According to the latest information, the Moscow City Council did not support the mayor's position and the privatization process was suspended altogether until the mayor and the Council could reconcile their differences.

Other republics are also aggressively pursuing the privatization of their public housing stock. The Ukraine parliament passed a law at the end of October that gives all households, including those on waiting lists, a housing voucher that can be used as (partial) payment for purchasing a unit or for rental payments. The law envisions a provision similar to that in the Russian Republic in which a minimum quantity of housing would be given away free of charge (in essence a flat price discount).

The opening of Soviet housing to market forces has had an immediate and dramatic effect on prices. The prices at the 1990 housing auctions in the USSR were usually in the 30-50 thousand rubles range (US \$5000-\$8333) for a standard two-room apartment. At the first auction in Tallinn (Estonia) in February 1991 one-room apartments went for 50,000 rubles, two-rooms brought 82,000-110,000 rubles and three-room units attracted offers of 150,000 rubles each. The 1991 auctions in Moscow have resulted in astronomical bids by

Soviet standards of up to 3 and 4 million rubles for a three-room apartment.³ In a recent sale, a suburban 75 square meter unit sold for 1.7 million rubles. At these prices, the purchasers are usually enterprises and foreign companies.

³These figures published in *Argumenty i fakty*, no. 23, 1991 sound unbelievable. More would have to be learned about this auction before making any definitive conclusions about the Moscow housing market.

4 THE EXISTING HOUSING STOCK

Soviet housing has historically been a highly heterogeneous consumer good. Consumption of housing cannot be summarized by a single indicator, as housing units differ according to a number of characteristics including size, location, design, and availability of infrastructure. Historically, however, the Soviet planners have tended to define housing in terms of space quantified in "millions of square meters", the number of housing units produced, and the number of rooms available to households. It is on these three indicators that the performance of the housing industry has been evaluated and rewarded by the Soviet government.

In 1986 Gorbachev's government launched the "Housing 2000" program with the goal of providing each Soviet household with a self-contained (separate) dwelling. In early 1990 slightly over 85% of approximately 90 million Soviet households (families and singles) resided in self-contained housing units. Despite government efforts to increase the amount of housing available, the ratio of households to housing units has actually increased since 1970, and currently stands at 1.17 households per housing unit. The total housing stock exceeded 48.5 billion sq. ft. in 1990, which translated into 170 sq. ft. per capita.

In order to fulfill the "Housing 2000" program, the Soviets planned to construct 21.5 billion sq. ft. of housing during the 1986-2000 period, later revised in a May 1990 Presidential Decree to 28 billion sq. ft., or over 40 million new housing units. In July 1991, however, the main Soviet statistical organization, GOSKOMSTAT, characterized the fulfillment of this program as "unrealistic."

To their favor, the Soviets have made significant progress toward achieving their target of a "socially necessary minimum" of housing space per person. The improvement of housing conditions is evident in the changing standards for new apartment allocations. In the early 1960's a household moving into newly built housing would normally be awarded a flat with $n - 2$ rooms, where n is the number of household members (i.e., a household consisting of four people would move into a two-room apartment). By the late 1960's the formula was modified to $n - 1$, and by the late 1970's the rule "one room, one person" was in effect for over one-quarter of all newly built housing units.

The following sections of this chapter look beyond these highly aggregated data in order to describe the current housing situation in the USSR more adequately in terms of production, distribution, access to infrastructure, and types of tenure.

4.1 Distribution of Housing Space

Most of the Soviet housing stock (64%) is located in urban areas. However, the per capita distribution of housing space differs significantly between urban and rural areas where the average allocation at the end of 1989 was, respectively, 164.7 and 180.8 square feet per person (Table 1). These averages, however, gloss over wide variations in housing quantity and quality among households. The regional distribution of housing and "living space" among Soviet households is presented in Table 2.⁴ It should be noted that almost 33% of Soviet households do not enjoy even the modest all-Union "sanitary norm" of 9 square meters per person.⁵

	1980	1985	1986	1987	1988	1989
Total Stock	3573	4072	4191	4316	4431	4541
State-Owned	1866	2278	2508	2596	2524	2604
Cooperative	103	136	143	154	161	175
Private	1604	1658	1683	1720	1748	1778
Per capita, sq.m.	13.4	14.6	14.9	15.2	15.5	15.8
Urban Housing Stock	2203	2561	2641	2720	2801	2874
State-Owned	1553	1844	2051	2121	2037	2108
Cooperative	102	133	142	150	158	164
Private	548	584	590	599	608	618
Per capita, sq.m.	13.1	14.1	14.3	14.5	14.7	15.1
Rural Housing Stock	1370	1511	1550	1596	1630	1667
State-Owned	313	434	457	475	487	496
Cooperative	1	3	3	3	3	11
Private	1056	1074	1093	1121	1140	1160
Per capita, sq.m.	13.9	15.6	16.1	16.1	17.0	17.0

Source: Narkhoz 1989, p.165; *Zhilishchnye* (1990), pp.15-17.

⁴Living space differs from housing space (or "overall useful space" in Soviet parlance) in that it excludes kitchens, bathrooms, and other auxiliary areas. Living space on average constitutes approximately 60% of all housing space.

⁵While 9 square meters was the all-Union standard, it is incorporated into the codes of only Moldavia, Latvia, Armenia, and Turkmenia. The standard, for example, in Uzbekistan was 10 square meters per person, in the Ukraine—13.65 square meters, and in all other republics—12 square meters.

TABLE 2
DISTRIBUTION OF HOUSEHOLDS BY THE SIZE OF
OCCUPIED LIVING SPACE - 1989
 (Millions of Households)

Size of Living Space per Person, square meters								
	Total Households	5 & less	5-6	7-8	9-12	13-14	15-19	20 & greater
TOTAL								
USSR	71.1	4.4	9.4	12.3	22.4	7.1	9.7	5.8
RSFSR	39.2	2.2	5.2	7.0	13.1	4.0	5.3	2.4
Ukraine	13.8	0.8	1.6	2.1	4.1	1.5	2.2	1.5
Byelorussia	2.7	0.1	0.3	0.4	0.9	0.3	0.4	0.3
Uzbekistan	3.3	0.3	0.6	0.6	0.9	0.3	0.3	0.3
Kazakhstan	3.7	0.3	0.6	0.7	1.2	0.3	0.4	0.2
Georgia	1.2	0.06	0.1	0.2	0.3	0.1	0.2	0.3
Azerbaijan	1.3	0.2	0.2	0.3	0.3	0.08	0.1	0.08
Lithuania	1.0	0.06	0.1	0.1	0.3	0.08	0.2	0.2
Moldavia	1.1	0.06	0.1	0.1	0.3	0.1	0.2	0.2
Latvia	0.7	0.03	0.08	0.1	0.2	0.07	0.1	0.07
Kirgizia	0.8	0.08	0.1	0.2	0.2	0.07	0.09	0.07
Tadjikistan	0.8	0.1	0.2	0.2	0.2	0.04	0.05	0.02
Armenia	0.5	0.04	0.08	0.1	0.1	0.04	0.06	0.06
Turkmenia	0.6	0.05	0.1	0.1	0.2	0.05	0.06	0.04
Estonia	0.4	0.01	0.03	0.06	0.1	0.06	0.08	0.06
URBAN AREAS								
USSR	48.2	3.1	6.7	8.6	16.2	4.9	6.2	2.5
RSFSR	28.9	1.7	4.0	5.3	10.1	3.0	3.6	1.2
Ukraine	9.2	0.6	1.2	1.5	2.9	1.0	1.3	0.7
Byelorussia	1.7	0.1	0.2	0.3	0.6	0.2	0.2	0.09
Uzbekistan	1.5	0.1	0.2	0.3	0.5	0.1	0.2	0.1
Kazakhstan	2.2	0.2	0.3	0.4	0.7	0.2	0.3	0.1
Georgia	0.7	0.05	0.08	0.1	0.2	0.05	0.1	0.08
Azerbaijan	0.7	0.1	0.13	0.1	0.2	0.04	0.07	0.04
Lithuania	0.7	0.05	0.1	0.1	0.2	0.05	0.1	0.05
Moldavia	0.5	0.05	0.08	0.09	0.2	0.05	0.05	0.03
Latvia	0.5	0.02	0.06	0.09	0.1	0.05	0.09	0.03
Kirgizia	0.3	0.03	0.06	0.07	0.1	0.03	0.04	0.02
Tadjikistan	0.3	0.04	0.06	0.06	0.08	0.02	0.03	0.01
Armenia	0.4	0.03	0.06	0.09	0.1	0.02	0.03	0.02
Turkmenia	0.3	0.03	0.05	0.06	0.09	0.02	0.03	0.02
Estonia	0.3	0.01	0.03	0.05	0.1	0.05	0.05	0.03

TABLE 2
DISTRIBUTION OF HOUSEHOLDS BY THE SIZE OF
OCCUPIED LIVING SPACE - 1989
(Millions of Households)

Size of Living Space per Person, square meters								
	Total Households	5 & less	5-6	7-8	9-12	13-14	15-19	20 & greater
RURAL AREAS								
USSR	22.9	1.3	2.7	3.7	6.2	2.2	3.5	3.3
RSFSR	10.3	0.5	1.2	1.7	3.0	1.0	1.7	1.2
Ukraine	4.6	0.2	0.4	0.6	1.2	0.5	0.9	0.8
Byelorussia	1.0	0.02	0.07	0.1	0.3	0.1	0.2	0.2
Uzbekistan	1.8	0.2	0.4	0.3	0.4	0.2	0.1	0.2
Kazakhstan	1.5	0.1	0.24	0.3	0.5	0.1	0.1	0.1
Georgia	0.5	0.01	0.02	0.05	0.1	0.05	0.1	0.2
Azerbaijan	0.6	0.07	0.1	0.2	0.1	0.04	0.09	0.04
Lithuania	0.3	0.01	0.02	0.03	0.1	0.03	0.05	0.1
Moldavia	0.6	0.01	0.05	0.06	0.1	0.07	0.1	0.2
Latvia	0.2	0.01	0.02	0.03	0.1	0.02	0.03	0.04
Kirgizia	0.5	0.05	0.07	0.08	0.1	0.04	0.05	0.05
Tadjikistan	0.5	0.1	0.1	0.1	0.1	0.02	0.02	0.01
Armenia	0.1	0.01	0.01	0.02	0.0	0.02	0.03	0.04
Turkmenia	0.3	0.02	0.04	0.05	0.1	0.03	0.03	0.02
Estonia	0.1	0.0	0.0	0.01	0.0	0.01	0.03	0.03

Source: *Zhilishchnye* (1990), p.59.

The availability of housing space also differs among the Soviet and Baltic republics. The three Baltic republics, with 18-19 square meters (193.7-204.5 square feet) per capita, have considerably more housing space per person than the rest of the USSR. The Central Asian republics occupy the bottom of the rankings, with only 10-14 square meters (10.8-150.7 square feet) per capita (see Table 3) To some extent this disparity is due to the variations in the demographic composition of the republics. Larger families in all republics tend to have lower per capita housing space, and the average size of households in Central Asia is significantly higher than it is in the Baltics and in the Slavic republics (Russia, Ukraine, and Byelorussia). Nevertheless, the data in Table 3 also reflect real differences in the allocation of housing among the republics.

TABLE 3
PER CAPITA HOUSING STOCK BY REPUBLIC - 1989
(Square Meters per Person)

	TOTAL POPULATION		FAMILIES		SINGLES	
	Housing Space	Living Space	Housing Space	Living Space	Housing Space	Living Space
USSR	15	10	14	10	30	19
RSFSR	15	10	14	9	28	18
Ukraine	17	11	16	10	36	22
Byelorussia	16	11	15	10	32	21
Uzbekistan	14	9	14	9	33	20
Kazakhstan	13	9	13	9	28	18
Georgia	20	14	19	13	47	32
Azerbaijan	12	8	12	8	31	19
Lithuania	18	11	17	11	32	20
Moldavia	18	12	17	11	35	23
Latvia	18	11	16	11	32	20
Kirgizia	13	9	13	9	31	20
Tadjikistan	10	7	10	7	28	18
Armenia	12	8	14	10	40	26
Turkmenia	13	9	13	9	33	21
Estonia	19	13	17	11	35	22

SOURCE: GOSKOMSTAT USSR, Press-vypusk No.177, May 4, 1990.

4.2 Age Composition and Retirement Rates of Soviet Housing

As noted in Table 4, Soviet housing stock is relatively young. More than 70% of it has been erected since 1960. Despite the fact that less than 14% of the stock had been built prior to 1951, the rates of housing retirement have been growing over the last five years.

During 1986-1989 about 1.7% of the existing housing stock or 823.5 million sq. ft. of housing has been retired. Normally, 20-25% of this housing is retired due to old age and disrepair, another 20-25% in order to free up space for new construction, and the remaining 50-60% is retired for other reasons such as conversion to non-residential uses.

The age composition of retired housing is unknown. Presumably most of it is old. However, given the particularly poor quality of housing built in the late 1950's and early 1960's, it is likely that a significant amount of that relatively new housing has been retired as well. According to a Soviet researcher (Gertsberg, 1990), most of the five-story walk-ups built during 1956-1970 are not worth maintaining for more than 50 years.

**TABLE 4
DISTRIBUTION OF HOUSING BY AGE AND
OUTSIDE WALL MATERIAL (PERCENT)**

	All Houses	Year of Construction			
		1951-60	1961-70	1971-80	1981-88
TOTAL					
Total	100	15.9	25.0	25.3	20.4
Brick	100	15.6	28.0	26.4	18.6
Concrete, Large Panels, Blocks	100	4.4	21.8	37.1	35.7
Wood	100	25.8	22.1	12.5	8.4
Mixed Material	100	25.1	26.4	18.2	12.5
Clay	100	23.4	27.5	17.5	12.2
Other Materials	100	24.7	28.3	21.0	16.8
All Houses	100	100	100	100	100
Brick	37.5	36.8	41.8	39.2	34.3
Concrete, Large Panels, Blocks	27.1	7.5	23.5	39.7	47.6
Wood	18.6	30.3	16.4	9.2	7.6
Mixed Material	4.4	7.0	4.7	3.2	2.7
Clay	10.5	15.5	11.5	7.2	6.3
Other Materials	1.9	2.9	2.1	1.5	1.5
URBAN AREAS					
Total	100	15.0	24.1	27.3	21.8
Brick	100	17.5	28.0	25.2	16.6
Concrete, Large Panels, Blocks	100	4.3	22.4	37.6	34.6
Wood	100	29.9	16.5	9.9	7.3
Mixed Material	100	32.5	21.8	12.8	7.6
Clay	100	30.5	22.9	11.6	6.4
Other Materials	100	35.4	23.3	14.9	11.6
All Houses	100	100	100	100	100
Brick	42.1	49.2	48.9	38.9	32.0
Concrete, Large Panels, Blocks	38.6	11.2	35.9	53.3	61.4
Wood	11.2	22.3	7.7	4.1	3.8
Mixed Material	3.1	6.8	2.8	1.5	1.1
Clay	3.8	7.8	3.6	1.6	1.1
Other Materials	1.2	2.7	1.1	0.6	0.6

TABLE 4 DISTRIBUTION OF HOUSING BY AGE AND OUTSIDE WALL MATERIAL (PERCENT)					
	All Houses	Year of Construction			
		1951-60	1961-70	1971-80	1981-88
RURAL AREAS					
Total	100	17.4	26.9	21.9	17.9
Brick	100	10.9	28.1	29.2	23.5
Concrete, Large Panels, Blocks	100	4.9	16.7	31.9	45.3
Wood	100	23.3	25.6	14.0	9.0
Mixed Material	100	19.1	30.3	22.6	16.4
Clay	100	21.3	28.9	19.2	13.9
Other Materials	100	17.7	35.1	25.0	20.2
All Houses	100	100	100	100	100
Brick	29.7	18.7	31.0	39.6	38.9
Concrete, Large Panels, Blocks	7.5	2.1	4.7	10.9	19.0
Wood	31.3	42.1	29.9	20.1	15.7
Mixed Material	6.6	7.3	7.4	6.8	6.0
Clay	21.8	26.7	23.4	19.1	17.0
Other Materials	3.1	3.1	3.6	3.5	3.4

SOURCE: *Zhilishchnye* (1990).

In addition, some housing was lost due to natural disasters and accidents. For example, the 1989 Armenian earthquake destroyed 42 million sq. ft. of housing space. At the end of 1989 approximately 639 million sq. ft. of space housing 4 million people was classified as dilapidated and in need of emergency repair.

Among the republics, the Baltics had the highest rates of dilapidated state and public housing stock (Table 5). This is due to the fact that the Baltic republics, spared the kind of destruction to the housing stock which took place in Russia, Byelorussia and the Ukraine during World War II, has a larger proportion of older housing, which tends to be more in need of repair.

4.3 Access to Infrastructure

One of the major parameters of housing quality is access to infrastructure. More than 55% of the Soviet housing stock does not have a full range of amenities (sewer system, running water, central heating, hot water). In rural areas this number is close to 90%. Only 20% of rural residents have access to running water. The inadequate power and capacity of

the water plants result in frequent interruptions in water supply to the population. In almost all republics the quality of drinking water fails to meet minimum government standards.

TABLE 5
DILAPIDATED AND CONDEMNED HOUSING STOCK
(square meters)

Union/ Republics	State and Public Housing Stock				Privately Owned Housing Stock in Urban Areas (end of 1989)	
	1987		1989		Total Space (000's)	Percent of Total
	Total Space (000's)	Percent of Total	Total Space (000's)	Percent of Total		
USSR	59,131	2.8	49,733	1.8	9,622	0.5
RSFSR	35,171	2.2	29,758	1.7	5,137	0.8
Moscow	1,242	0.8	1,118	0.7	71	13.5
Leningrad	523	0.6	572	0.7	31	2.6
Far East	3,662	4.1	2,901	3.0	396	2.7
Ukraine	4,219	1.1	4,421	1.0	390	0.1
Lithuania	1,822	4.6	1,517	3.5	1,202	4.3
Latvia	4,320	11.6	3,890	10.0	66	0.7
Estonia	1,179	5.1	1,078	4.5	14	0.1
Georgia	965	3.3	394	2.9	72	0.1
Azerbaijan	389	1.3	368	1.2	--	--
Armenia	534	2.2	756	3.2	742	3.0
Uzbekistan	1,097	1.5	1,066	1.4	1,483	0.9
Kirgizia	340	2.1	285	1.7	4	0.01
Tadjikistan	316	1.9	255	1.4	83	2.7
Turkmenia	739	5.0	665	4.4	--	--
Kazakhstan	6,892	4.7	4,098	2.6	250	0.3
Byelorussia	893	1.0	356	0.4	169	0.2
Moldavia	443	2.0	373	1.6	11	0.02

SOURCE: *ZHILISHCHNOE* (1990), p.26-32.

A large part of the utility pipeline network is in need of emergency repair. According to GOSKOMSTAT, the long-term neglect of existing utilities by local authorities and enterprises, both of whom have responsibilities for the provision of infrastructure, has brought

the utility services system "to the brink of collapse."⁶ More data on the availability of amenities in Soviet housing is presented in **Table 6**.

4.4 Volumes and Types of Housing Construction

The rates of growth of Soviet housing production in terms of housing space and the number of units peaked during the 1956-1960 five-year plan (FYP) when the average annual production reached 1,020 million sq. ft. Housing construction remained stable until 1980 when growth picked up. The increase in housing production was part of the Soviet government's effort to improve the plight of consumers. The output of housing during the last FYP showed almost a 17% increase over the previous period.

The amount of housing space produced in 1989 was almost 23% greater than that in 1980 (housing construction broken down by republics is presented in **Tables 7-9**). The industry's performance in 1990, however, has been disappointing to Soviet planners. Only 1.8 million housing units were built totalling 1,238 million sq. ft. of space which represents a decline of 150 million sq. ft. or 340,000 units compared to 1989. In fact, the 1990 output measured in terms of housing space was the lowest since 1986.

Until recently, most of the activities of the Soviet housing construction industry have been planned in a highly centralized manner. The performance of the industry has been evaluated based on the fulfillment of a system of government plans, including quarterly, six-month, annual, and five-year plans. The most important of these plans was the annual plan. As previously mentioned, the planners measured the sector's performance mainly by the meters of housing space built and by the number of housing units produced.

The concentration on the narrow range of physical output indicators led to a high degree of standardization of Soviet construction techniques at the expense of variety and innovation. Large panel construction (LPC) constitutes by far the predominant type of new urban housing, accounting for 53% of state financed housing output in terms of space (see **Table 10**). This type of construction has been favored by Soviet planners since the mid-1950's, when the housing construction industry was industrialized to address the severe housing shortage left in the wake of World War II.

⁶GOSKOMSTAT, Press-vypusk 214, July 24, 1991.

TABLE 6
AVAILABILITY OF UTILITIES AND OTHER AMENITIES
 (end of year, percent)

	1980	1985	1989
Urban living space, equipped with			
running water	70.4	74.8	77.3
sewage	67.0	71.0	74.1
central heating	68.2	73.1	75.8
hot water	42.0	54.9	59.9
bathroom or shower	60.0	64.7	68.4
gas stove (gas lines or bottle)	71.0	73.6	74.6
electric stoves	3.0	9.4	12.1
State, public organizations, cooperative-owned urban living space equipped with			
running water	89.8	91.8	93.2
sewage	97.8	89.7	91.4
central heating	86.5	88.9	90.3
hot water	57.1	71.2	76.3
bathroom or shower	79.9	83.2	86.0
gas stove (gas lines or bottle)	79.4	78.3	77.3
electric stoves	4.1	12.5	15.8
Privately-owned urban living space equipped with			
running water	17.1	22.7	25.1
sewage	10.0	14.0	17.1
central heating	17.9	24.8	28.3
hot water	0.5	5.2	6.4
bathroom or shower	5.4	8.4	10.5
gas stove (gas lines or bottle)	48.2	59.5	65.9
electric stoves	0.0	0.0	0.1
State, public organizations, cooperative-owned rural living space equipped with			
running water	30.3	38.4	45.0
sewage	23.0	28.5	34.2
central heating	26.9	30.8	34.9
hot water	9.1	13.6	16.8
bathroom or shower	19.4	23.9	29.4
gas stove (gas lines or bottle)	60.8	73.7	77.6
electric stoves	0.2	1.8	2.7

SOURCE: *Zhilishchnye* (1990), p.39.

NOTE: Of the privately-owned rural housing, 76% is equipped with gas, 8-10% is equipped with central heating and running water, and less than 4% is equipped with sewage lines.

TABLE 7
HOUSING CONSTRUCTION BY REPUBLIC

	1980	1985	1986	1987	1988	1989
Million square meters of housing space						
USSR	105	113	119.8	131.5	132.3	128.9
Thousand square meters of housing space						
RSFSR	59,351	62,551	66,174	72,845	72,330	70,983
Ukraine	17,326	19,193	20,441	21,257	20,978	19,510
Byelorussia	4,291	5,106	5,396	5,878	5,594	5,650
Uzbekistan	5,742	6,004	6,345	7,051	8,251	8,629
Kazakhstan	5,793	6,627	6,791	8,323	8,784	8,608
Georgia	1,698	1,727	1,696	1,778	1,687	1,497
Azerbaijan	1,348	1,746	2,104	2,849	2,815	2,650
Lithuania	1,686	1,841	1,990	2,098	2,003	1,843
Moldavia	1,526	1,699	1,803	2,111	1,974	1,757
Latvia	1,099	1,170	1,266	1,354	1,130	1,085
Kirgizia	1,059	1,096	1,198	1,216	1,354	1,462
Tadjikistan	1,049	1,096	1,203	1,423	1,618	1,684
Armenia	999	1,113	1,290	1,142	1,125	1,328
Turkmenia	1,028	1,129	1,180	1,308	1,544	1,621
Estonia	812	785	815	812	677	589

SOURCE: Narkhoz 1989, p. 156; *Kapital'noe* (1989), p. 136.

Dating from the mid-1950's, the government decreed the development of a network of LPC plants and design bureaus mainly in the largest cities. The LPC technology fit the pattern of Soviet planners reliance on large scale standardized solutions involving assembly-type heavy industrial techniques. The LPC process seemed to allow for the realization of large economies of scale in housing production, and offered the prospect of rapid improvement of Soviet housing conditions. All other housing construction technologies were considered "without a future" and were starved of resources, leading over time to the deterioration of their physical assets and their associated pools of human capital. Despite three decades of emphasis on LPC technology, efforts to meet the country's demand for housing have largely failed.

TABLE 8
HOUSING CONSTRUCTION BY REPUBLIC
 (thousand housing units)

	1980	1985	1986	1987	1988	1989
USSR	2,004	1,991	2,100	2,265	2,231	2,119
RSFSR	1,190.5	1,151.4	1,217.1	1,312.9	1,282.6	1,231.3
Ukraine	329.0	341.0	361.1	371.0	361.2	328.7
Byelorussia	80.4	88.5	92.1	99.7	92.5	94.4
Uzbekistan	91.7	85.0	90.3	100.8	111.7	114.0
Kazakhstan	103.5	110.3	110.9	134.0	134.6	127.9
Georgia	25.1	26.2	24.2	24.5	22.7	18.2
Azerbaijan	23.3	27.7	32.4	39.0	37.0	34.8
Lithuania	28.3	28.8	30.8	33.8	31.6	28.8
Moldavia	27.5	28.1	29.0	34.2	30.6	25.7
Latvia	19.9	19.9	21.1	23.0	18.3	17.4
Kirgizia	18.1	16.6	18.9	18.9	20.3	21.7
Tadjikistan	18.7	19.4	20.8	24.6	27.1	28.8
Armenia	15.4	16.6	18.2	15.8	14.5	17.7
Turkmenia	14.5	15.7	16.9	17.4	19.3	20.1
Estonia	14.4	13.5	13.5	14.0	11.4	9.5

SOURCE: Narkhoz 1989, p. 159; *Kapital'noe* (1989), p. 147.

The rigid large panel construction process has left an indelible mark on the Soviet urban landscape. In order to make the LPC process cost efficient, the panel producing enterprises undertake large production runs, requiring a high degree of standardization. As a result, five-story and later nine-story large panel buildings have come to dominate housing construction in all Soviet cities, accounting for 76% of all housing produced by LPC technology. These buildings have only 5 different apartment plans which must accommodate 20-25 different types of families as distinguished by the Soviet sociologists (Ronkin, 1989, p. 16). The rigidity of standardized panel construction has resulted in a monotonous and expressionless look to the majority of new urban developments; and an inconsistency between the available housing and the social and demographic composition, cultural traditions, and preferences of the population. In addition, the standardization has ignored the varying climactic conditions of different geographic regions of the USSR.

TABLE 9
HOUSING CONSTRUCTION PER 10,000 POPULATION
BY REPUBLIC
 (average annual production, housing units)

	1976-80	1981-85	1986-89
USSR	78	74	77
RSFSR	88	83	87
Ukraine	69	67	69
Byelorussia	82	86	94
Uzbekistan	60	51	54
Kazakhstan	75	69	78
Georgia	50	51	42
Azerbaijan	42	41	52
Lithuania	95	84	85
Moldavia	68	65	69
Latvia	79	75	76
Kirgizia	51	44	48
Tadjikistan	54	45	51
Armenia	58	53	50
Turkmenia	54	46	54
Estonia	92	91	78

SOURCE: *Zhilishchnye* (1990), p.95.

TABLE 10
DISTRIBUTION OF STATE-FINANCED HOUSING
BY WALL MATERIAL
 (percent of all finished construction)

	1980	1984	1989
Brick and stone	35	34	33
Large panels	51	52	53
Large blocks	5	5	4
Wood	5	5	5

SOURCE: *Zhilishchnye* (1990), p.99.

To a large extent this situation is due to the prevailing reward structure in the Soviet housing construction industry. Since industry performance has been based solely on the number of square meters of housing built, the easiest way to fulfill plan targets has been to build essentially the same housing everywhere (see chapter 7).

4.5 Mechanisms and Types of Tenure

There are three major types of housing ownership in the USSR: state, cooperative, and individual (i.e., private). State ownership dominates in the cities, while individual housing is prevalent in rural areas. The cooperative housing sector constitutes a relatively small share of the total (see Table 11). A minor share of housing belongs to public organizations such as trade unions.

TABLE 11 FORMS OF OWNERSHIP OF HOUSING STOCK, 1990 (percent)		
	Urban	Rural
State Housing	72.3	24.0
• Regional/Local Councils	35.5	1.3
• Ministries/enterprises	36.8	22.7
Public organizations	0.3	0.3
Collective farms	0.3	5.8
Housing Cooperatives	5.7	0.2
Private	21.4	69.8
SOURCE: IMF (1990), p.339.		

4.5.1 State-Owned Housing

State-owned housing is divided into municipal stock and "departmental" (*vedomstvennyi*) stock managed by the industrial enterprises and ministries. In 1957 the Soviet government transferred responsibility for all state-owned urban housing to the jurisdiction of the municipal authorities (city councils). The rationale for this decision was the hope for improved coordination of housing construction and allocation under a "single-developer" system (see Trehub 1985 for a more detailed description).

So far, however, the ministries and enterprises have been largely successful in resisting this transfer. Control over housing is important for enterprises because the departmental housing stock plays an important role in their ability to attract and retain valuable employees.⁷ In addition, the municipal authorities are normally ill-equipped to take on the burden of building and operating more housing. Despite the central authorities' repeated calls for the transfer of housing to the city councils, the municipalities controlled less than half of urban and just over 5% of rural state-owned housing stock in 1990 (see Table 11).⁸ During the 1986-1989 period only 850 million sq. ft. of housing (8% of the departmental stock) were transferred to the city councils.

Soviet citizens rent housing from the state for indefinite terms. The renters consider their apartments as almost their personal property which can, after some effort, be transferred to their children or even "sold" to others.⁹ Even individuals who rent their housing in buildings managed by enterprises cannot be easily evicted after the termination of their employment.¹⁰

The Soviet enterprises and ministries also operate a large number of worker hostels, which by the end of 1989 housed approximately 8 million people. As a rule, several workers share a room in these hostels. Common facilities (kitchens, bathrooms, etc.) are very limited in availability and are shared by a large number of people. Regulations prohibiting families from living in the hostels for singles are not always enforced. Sometimes factories build temporary dormitories for families, but many families end up living in these quarters for many years. According to one Soviet newspaper account, at one enterprise three quarters of the residents had been living in such a "temporary" hostel for almost twenty years (*Trud*, December 8, 1984). Hostels are located primarily in the new industrial cities, as well as in the cities with highly restrictive residency policies such as Moscow.

According to official data, almost 15% of Soviet households continue to reside in "communal" apartments where several families share a kitchen, a bathroom, and other

⁷Note, however, that housing does not serve as an efficient incentive for better work. It takes a long time to obtain a unit even for a good worker and, more importantly, after it has been awarded housing loses its incentive role.

⁸It must be mentioned that Moscow and other large cities have a better track record of bringing state-owned housing under the control of the municipal authorities.

⁹While exchanges of apartments are legal with the new occupants registering with the respective management organization, "selling" of state-owned housing by the tenants is, of course, illegal. Nevertheless, transactions similar to selling and purchasing, including side-payments during apartment exchanges and bribes to officials responsible for housing allocation, are commonplace.

¹⁰Housing controlled by state-owned farms and some other types of enterprises provides an exception to this rule.

auxiliary facilities. These data, however, may be seriously flawed as they do not take into account the members of extended families who are forced to share an apartment because they cannot obtain separate housing. Official data on distribution of families by type of housing are given in Table 12.

	Number of Families, Thousand			Percent of Total		
	Total	Urban	Rural	Total	Urban	Rural
Apartments	38,642	33,077	5,565	52.9	66.6	23.8
Houses	24,283	8,276	16,077	33.2	16.7	68.3
Communal						
Apartments	3,488	3,158	330	4.8	6.3	1.4
Parts of houses	2,414	1,525	889	3.3	3.1	3.8
Hostels	2,285	2,138	147	3.1	4.3	0.6
Other	223	158	65	0.3	0.3	0.3
Total Families	73,078	49,644	23,434	100	100	100

NOTE: Figures do not include households consisting of singles nor those renting privately.
SOURCE: *GOSKOMSTAT USSR, Press-vypusk No.177, May 4, 1990.*

4.5.2 Cooperative Housing

A housing construction cooperative (HCC) is a voluntary organization of citizens who wish to improve their housing conditions by constructing an apartment building using their pooled resources and government credit. It is important to understand that HCC members do not physically build housing by themselves but hire construction contractors (usually government enterprises) to do the job. Housing cooperatives are independent legal entities.

Strictly speaking, the cooperative members do not own their apartments. Instead they own shares in the building. Decisions regarding the sale, exchange or bequest of their dwellings must be approved by the executive committee of the cooperative. All such transactions are contingent on the approval of the cooperative's membership. Given their participatory nature, housing cooperatives constitute relatively democratic organizations of citizens.

At present, cooperative housing constitutes approximately 5.7% of all urban housing stock and 0.2% of rural housing (Table 11). The share of cooperatives in housing construction has grown, from 5.2% in the late 1970's to over 6% in the second half of the 1980's, but remains small relative to overall output. Historically, little funding has been available to cooperatives because of the higher priority accorded to other housing investments. The role of the HCC's is likely to increase in the near future as reforms shift the burden of housing financing from the state to individuals (see sections 5.3 and 8.1 for more information).

4.5.3 Privately Owned Housing

Private ownership of housing is widespread in rural areas, where it constitutes 69.8% of all housing stock, and in small cities. Until recently, individual housing construction had been discouraged by the government, and indeed, construction of private housing was prohibited in cities with a population of over 100,000. Serious limitations on the size of privately-owned residences were in effect as well. In addition, the exchange of private houses for state-owned apartments was not permitted.

By now, most restrictions on private ownership of a dwelling unit have been lifted or greatly relaxed, and individual housing construction is seen as a primary means of resolving the country's housing problem. It is still prohibited, however, for Soviet citizens to own more than one residence, and spouses living together can only own one house.¹¹ Importantly, the law continues to prohibit private ownership of land on which housing is situated. The sale and bequest of privately-owned houses, though, can be accomplished relatively freely.

4.5.4 Private Rental Housing

Soviet law has allowed households and singles to rent all types of housing from private individuals. State-owned and cooperative apartments, however, cannot be systematically rented out for profit under the law.¹² Officially, a landlord can charge rent only up to the amount of his own expenditures on the dwelling. This restriction has been routinely violated. According to some estimates, the per square foot rent charged in the late 1970's in private subletting typically exceeded the rent on state-owned housing by a factor of 10 and more (Alexeev 1991). According to Soviet newspaper reports, the rent for a one-room apartment in a Moscow cooperative in the mid-1980's varied from 50 to 100 rubles a month depending on location. Based on official data, an average Soviet household at the time was spending less than 15 rubles a month on housing rent and utilities. (For more information on private rentals see section 8.2.)

¹¹Suburban residences not equipped for year-round occupancy are excluded from this rule.

¹²The word "systematically" provides a loophole making it difficult to convict anybody for violating this law.

4.5.5 Countryside Houses (*Dachas*)

The law prohibits a Soviet household to own or rent more than one permanent residence. Households are allowed, however, to have a country house, or *dacha*. The concept of a *dacha* is rather broad and vague. The following is a description provided by Smith (1976):

Dacha is one of those magical elastic words in Russian that conceals more than it reveals. ... For a *dacha* can mean anything from a little, oversized toolshed or a one-room cabin on a tiny plot of ground, surrounded by a development of identical little cabins with no privacy, to a modest but pleasant four-room country cottage without plumbing in a plain Russian village, to a grand mansion taken over from the old aristocracy or a more up-to-date, rambling country villa built in the forties by German prisoners-of-war. (p. 47).

Some *dachas* are owned by the state or an organization and can be used free-of-charge or for a token payment by certain officials. Others are privately—or cooperatively—owned, and can be bought or sold in a rather free market environment. The owners often spend weekends, vacations, and even some weekdays at their *dachas*. Many urban households rent *dachas* during the summer. According to "Sotsial'noe ..." (1989), there exist 6.3 million suburban dwellings for "temporary living." Out of this number, almost 6.2 million are houses located on garden plots, with the remaining 103,000 referred to as *dachas*. Estimates (Kosareva et al, 1990) indicate that only about 20% of construction materials for garden houses are obtained legally. As a rule country houses have virtually no amenities.

The demand for *dachas* and garden houses appears to be rising rapidly, and their construction is accelerating. It must be noted that the newly built *dachas* are considerably better supplied with amenities than the existing stock. Soviet economists expect that the urban population's investments in country houses will more than double its investments in individual permanent residences.¹³

¹³As a means of providing a quick, significant, privately-financed increment to the housing stock, it has been suggested that garden houses could be converted into year-round units. Of course, this proposal would have to be evaluated against the costs of providing basic infrastructure and probably improved transportation services.

5 INSTITUTIONAL FRAMEWORK FOR HOUSING PRODUCTION AND MANAGEMENT

As one hears on all fronts, the allocation of functions and responsibilities within the Soviet housing sector among the union, republic and local levels of government is in a state of flux. The importance of the union government, particularly the union ministries, has been rapidly declining since early 1990. Even prior to the failed August 1991 coup attempt, the majority of policy and planning decision-making had passed to the republic level of government.

Currently, most urban housing is still designed and built by state design bureaus and construction enterprises, respectively. Until recently, the major part of financial resources for construction has been appropriated by the central government, while the actual contracting and oversight of housing construction, as well as management of the existing housing, has remained the responsibility of the local entities, including local government and state enterprises. The executive committees of the local councils are playing an ever increasingly important role with respect to the provision of housing.

This chapter attempts to trace the evolution in the allocation of housing sector responsibilities among the three levels of government in the areas of policy and plan formulation, financing, regulatory framework, production, maintenance and cost recovery.

5.1 The Overall Planning Process for State Housing Construction

Until the demise of the union ministries, all state housing construction took place in accordance with the plans of economic and social development of the USSR. State housing construction was carried out directly through centralized allocations of investment resources, and indirectly through the internal funds of the state enterprises. With respect to housing, priority in centralized investment allocations was given to the construction of workers' housing for the new enterprises and in newly developing regions.

The center allocated investment resources either by industry or region. There existed a long list of the union and union-republic ministries and agencies which received planned centralized allocations of resources for housing construction.¹⁴ In addition, the Councils of

¹⁴The union ministries are subordinated to the Council of Ministers of the USSR. The union-republic ministries exist both at the union and at the republic level. In this case the republic ministry is subordinated to both the corresponding union ministry and to the republic Council of Ministers.

Ministers of the union and of the autonomous republics,¹⁵ and the executive councils of people's deputies in the provinces and in the cities were supposed to work out the five-year and annual plans for residential construction and its corresponding infrastructure. The annual plans formulated by the regional authorities included the planned housing targets of the enterprises subordinated to the all-union authorities.

After receiving information on housing requirements, the union ministries used to allocate the disaggregated investment targets to their respective subordinated enterprises. Plan targets included the total cost of construction work, the overall housing space, and the number of apartments to be built. In a similar manner the Councils of Ministers of the republics disaggregated the plan targets for their constituent autonomous republics and the executive councils of the provinces and cities, as well as for their subordinated republic-level enterprises. The final lower level plans (those at the autonomous republic, province and city levels, and at the enterprises) were based on the total construction volumes approved from above. However, the lower level authorities provided the higher authorities with information on housing requirements and investment allocations. These requests were presumably taken into account when the higher level planners disaggregated the housing targets for the lower level planners.

The centralized planning targets for housing construction were formulated in physical units such as housing space and the number of apartments constructed. The volume of financial investment was then determined based on an average estimated cost of housing for each republic or union ministry.

The role of the central and republican planners essentially ended after the final versions of the local disaggregated plans were distributed. From that point on the local authorities (either municipal or enterprise) contracted for housing construction with the builders and oversaw the construction process.¹⁶

Housing construction in large cities was and still is conducted mostly through a single (unified) client organization set up under the municipal executive committee. Depending on the volume of construction, these organizations are called "sectors," "administrations," or

¹⁵The union was composed of 15 republics. The republics are divided into provinces (*oblast'*, plural *oblasti*). Certain national areas within some of the union republics are named the Autonomous Soviet Socialist Republic. Their top officials have titles of ministers. For most practical purposes, however, the status of the autonomous republics is similar to that of a province.

¹⁶It must be pointed out, however, that earmarking investment resources for a particular project in the plan does not necessarily imply that these resources would actually be available to the project. Further intervention of the authorities at the republican or ministerial level may be required to assure obligation of the needed inputs. Often the construction organization or the client may find it necessary to intercede with higher level authorities in order to ensure the flow of financing through project completion.

"main administrations of construction" (see section 7 for a detailed explanation of the Soviet construction sector). As a rule the city contracts with a state-owned construction enterprise. The largest cities have their own construction companies. Recent changes have involved the affiliation of construction cooperatives with municipal authorities, which have appeared in cities such as Omsk. These brigades build residential housing under contract with the city council or other clients.

In the past, the union ministries that received centralized investment allocations and wanted to build housing for their enterprises in a particular city, transferred the investment resources to the Council of Ministers of the corresponding republic. The republican authority then made these resources available to the city council. After the construction phase was completed, the city council's executive committee allocated the requisite amount of housing space to the appropriate enterprise.¹⁷

In some large cities, and in many medium to small size cities and towns, a majority of housing was, and most likely continues to be, contracted directly by the industrial ministries and departments, which circumvents the municipal executive committee process. Various cooperative and public entities also organize for the purpose of housing construction.¹⁸ These organizations obtain land for construction from the municipal government, contract for design work, obtain necessary bank credits, and negotiate a contract with a construction organization. Sometimes these latter organizations, which wish to construct housing on a one-time basis, use a construction company temporarily set up for a specific project.

An important function of the local authorities has always consisted in monitoring the quality of construction. The responsibility for the final approval of the completed project belongs to the special "state acceptance commission." Prior to presenting the project to the commission, however, the client and the builder check the quality of work to verify agreement between the performed work and the original project design, cost estimates, and other parameters. At the final stage of the process, the project is inspected by the executive committee of the local council of people's deputies. Only after the executive committee approves the report of the state acceptance commission can the housing project be included in the plan fulfillment report.

¹⁷The city normally withholds certain amounts of housing for the workers of the construction enterprise that constructed the housing (10% of housing space), for the housing management personnel (2% of housing space), and for resettlement of the displaced residents from the site of the new housing (up to 6% of housing space).

¹⁸Alternatively, a housing cooperative can delegate the role of the consumer to an appropriate department of the executive committee of the local council.

5.2 Regulatory Framework for the Planning of the Soviet Cities

Zoning of Soviet cities takes place within the framework of the so-called General Plan of the City which is formulated by the municipal authorities. The General Plan outlines the directions of a city's long-term development including the approximate volume of new construction requirements. Due to their aggregate nature and low degree of precision, the construction volumes in the General Plan rarely have a significant effect on the specific policies of residential construction.

Planning for the development of Soviet cities, and the private sector's potential role in that development, is viewed problematically for the following reasons (see Poulsen, 1980):

- no coherent guidelines for city development exist in the USSR;
- cities do not have adequate staff to elaborate nor review development plans and often contract with special agencies in Moscow or St. Petersburg, which have almost no knowledge of local circumstances;
- adequate demographic and economic data are usually not available to city planners nor construction enterprises;
- completed plans are often not implemented due to the municipalities' lack of investment resources and political authority over the industrial enterprises and other agencies;
- enterprises and agencies contract for housing construction according to their own priorities often disregarding the General Plan and the existing city infrastructure;
- acute shortage of housing and lack of resources for resettlement prevents the cities from tearing down existing obsolete dwellings, thereby pushing new urban development onto the periphery.

Typically, residential housing takes up only 20-25% of a city's territory. Approximately 40% of the developed territory is occupied by industrial enterprises and warehouses. According to Ronkin (1989), in most cities 70-75% of new construction will have to take place on undeveloped land located at or near the periphery.

It should be noted that the General Plans for most cities had been developed prior to the introduction of the ambitious "Housing 2000" program. For that reason, existing city plans have inadequate provisions for the building plot and land requirements to meet the "Housing 2000" program goals. Many large cities already lack available land for residential construction.

5.3 Design of Housing and Control of Standards

The design of housing is usually performed by central design bureaus subordinate to the State Committee on Architecture.¹⁹ In larger cities such as Moscow, the entire construction complex (design and construction) may be subordinate to the city council. Even at that level, however, an incentive structure that rewards gross volume output and other plan targets impedes innovation and variety of design (see section 6.3).²⁰ Often there is no competition in design and little consideration given to alternative designs for projects. Cooperative and private consumers of housing, like municipal authorities and state-owned enterprises, usually use standardized housing designs. In the late 1980's, the government permitted the formation of housing design cooperatives, but little information is currently available on their activities.

The responsibility for providing expert advice to construction organizations, controlling quality of output, developing new technologies and standards, lies with the State Committee on Construction and Investments (formerly GOSSTROI), an agency which until 1988 coordinated the activities of a major portion of the Soviet construction industry.

5.4 Land Use Practices

Land use practices in Soviet cities are notably different from those in the West. Western cities have developed through a multitude of individual—public and private sector—decisions based on maximizing the utility of their investments. These decisions take into account differing costs of land based upon competitive bidding, economies of scale, and the benefits of agglomeration with similar or complementary enterprises. In this market-based environment, differential land rents can be visualized as a three-dimensional surface with its pinnacle in the central business district and lesser nodes at important transportation intersections.²¹

¹⁹According to Ronkin (1989), in the entire Soviet Union there is only one central and 5 regional design institutes which develop a limited number of basically similar standard designs. There is a significant additional pool of skilled architects and engineers who work in the Soviet construction industry but who can presumably switch into residential housing design. As recently as early 1991, research work in construction organization and technology was performed by 50 research institutes and 84 research divisions in the design institutes attached to Gosstroi USSR, construction ministries, committees, trusts, and associations. In addition, A/E design work is performed by scientists from 30 construction and architectural teaching institutes and 90 construction departments of the polytechnic teaching institutes (roughly equivalent to US engineering schools).

²⁰The construction industry as a whole is evaluated by the state apparatus according to the estimated (*smetnaia*) total cost of its projects (the greater the cost, the greater the reward) and the amount of housing space built, regardless of its acceptability to the future occupants.

²¹ See Thomas Poulson, "Urban Forms and Infrastructure in the Soviet Union" in S. Grant, Editor, *Soviet Housing and Urban Design*, HUD, 1980, pp. 18-20.

In Soviet cities, however, public decisions have not been motivated by a desire to allocate land to its best and most cost-effective use. Land has been treated as a free commodity with no inherently different values for central versus peripheral locations. Thus one finds obsolete factories with extensive storage yards near the centers of most towns, occupying land that would be far more useful for housing or service functions. Between 30 and 40 percent of inner areas of cities are, in fact, given to industrial land uses—a very high proportion in comparison with the 8 to 11 percent characteristic of American cities.²²

Since the ministries responsible for industrial land use pay no taxes based on the utility of land, nor would it receive anything for relinquishing its central location, there is no incentive to relocate. Thus, opportunities for more intensive and rational land use are foregone. This contributes to a fossilization of city land use patterns—once a structure and a function is established, it perpetuates itself until a specific administrative decision forces change. As a result, vast tracts of prime urban land are wastefully tied up with inefficient and inappropriate land uses.

At present, Soviet cities are beginning to address the absence of land markets. According to the existing law, all land in the USSR is national property. In other words, the law still does not permit full private ownership of land. The law on land reform passed at the end of 1990 allowed private farmers a limited ownership of land (farmers can "own" land but cannot resell it to another individual). Further land legislation is being prepared in the Russian parliament, but at present it is not clear what degree of private ownership will be permitted. While significant resistance persists with respect to allowing relatively free trade in land by individuals, the recognition of the necessity of land markets is growing. Without such systems in place, land cannot be allocated or developed efficiently.

The land situation is further compounded by considerable confusion over what government entity or enterprise owns which state assets, and the unclear division of responsibilities for the development and maintenance of public spaces and urban utilities. Full private ownership of land is not necessarily the only solution. Experts have noted the important experiments taking place in China that involve long-term leasehold contracts comparable to those in effect in Hong Kong.²³ Under such a system, the state maintains permanent ownership of urban land, but land-use rights can be traded and inherited according to the terms of the lease.

²² Ibid, p. 19.

²³ See Chapter 9: Housing in "A Study of the Soviet Economy", IMF, World Bank, OECD, and EBRD, February 1991.

5.5 Infrastructure and Supporting Facilities

The construction and maintenance of infrastructure (utilities, utility lines, access roads, public transportation) is the responsibility of either local authorities or enterprises. Utilities and other infrastructure for housing construction cooperative (HCC) projects are the responsibility of the city councils.²⁴ Both city councils and state enterprises, however, tend to neglect the development of infrastructure for housing. Construction of actual housing space is considered more important than the adequate provision of supporting infrastructure. This is due to the fact that the reward structure under which performance is evaluated is based on the housing space built and the number of households resettled in new housing. Additionally, housing construction often takes place on the outskirts of the city, making provision of adequate infrastructure extremely expensive. Enterprises, acting as free riders on existing municipal services, often disregard the effect of new housing production on the city resources.

The same factors inhibit the development of commercial and community facilities such as shops, stores, schools, recreational areas in newly built housing projects. In the larger cities of the Russian republic, expenditures on commercial and community facilities constitute 25% to 33% of total investment in housing construction. Soviet researchers, however, have calculated that the ideal figure should exceed 50%. Given the emphasis on housing production, resources allocated for community and commercial facilities are often under-utilized. In 1987, for example, 98% of the resources allocated to housing were expended, while only 86% of the resources earmarked for the construction of supporting facilities were utilized.

The implications of the decentralization trend in housing finance on the development of infrastructure and supporting facilities are not clear. On the one hand, traditionally, investments for infrastructure used to come mainly from the central budget. The reduction of the role of central budget may, therefore, lead to a reduction in expenditures on infrastructure. At the same time, an increase in housing construction activities by enterprises, cooperatives, and individuals may further burden the existing infrastructure and services. On the other hand, local sources of financing are presumably more responsive to the wishes of the new housing tenants who may demand more locally-based investments in supporting facilities and infrastructure.

5.6 Management of Housing

Management of state-owned residential housing is performed by either the local executive committee of the local council or by the enterprise which financed the construction. Cooperatives and private individuals manage their own housing. Utilities, however, are

²⁴Incidentally, this is one of the reasons why the local authorities do not particularly favor HCC's.

usually under the control of the city council. Enterprises and organizations which own housing often manage some of the utilities servicing the housing under their control.

Management of state-owned housing is guided by economic and financial plans that are prepared for every housing management organization. These plans are developed by the housing manager and the accountant and have to be approved by the municipal authorities or by the enterprise which owns the building. An economic-financial plan is based on the condition of the housing unit and takes into account the comments of the tenants. The plan is considered by the so-called housing committee (*domovoi komitet*) which can make non-binding suggestions. The housing committee is a public organization of the tenants residing in a housing unit serviced by a particular housing management organization. The housing committees are subordinated to the executive committee of the local people's council or to the trade union administration of the enterprise which owns the building.

It is our understanding that there are a large number of state-owned management organizations. At least in some districts of Moscow and St. Petersburg, there are 3 or 4 present. To date they have not competed with each other. Importantly, however, they could be transformed into competitors in the future.

5.7 The System of Housing Allocation

Residential housing is one of the most strictly rationed goods in the Soviet Union. The Soviet Constitution proclaims Soviet citizens' right to housing and guarantees this right by "fair allocation under public control." This allocation is not supposed to be based on one's ability to pay but on a series of other indicators such as number of people in the family, state of their health, or participation in the Great Patriotic War. While the Soviet desire to provide decent housing to every citizen is commendable, the existing rationing system lends itself to improprieties, corruption, and preferential treatment of certain consumers, creating gross inefficiencies and inequalities, and impeding improvement in Soviet housing conditions in the process.

The following sections describe the allocation process for state-owned, cooperative and privately-owned housing.

5.7.1 State-Owned Housing

State-owned housing is highly subsidized by the Soviet state. High subsidies combined with the relatively insufficient size of the housing stock result in large and persistent excess demand for state-owned housing. This necessitates the employment of formal, non-price rationing mechanisms such as waiting lists. The waiting lists are managed by the executive committee of the city or district council, in the case of municipal housing, and by the enterprises in the case of departmental housing.

The officially proclaimed criteria for placement on a waiting list are based mainly on the "genuine need" for improvement in a household's living conditions. Normally, the "genuine need" applies when a household has access to less than 7 square meters per person. The limit is higher for the residents of communal apartments. The occupants of dilapidated housing are also eligible to join a waiting list. Some categories of citizens such as war veterans, the handicapped, "heroes of socialist labor" and the like have privileges allowing them to bypass the regular waiting list (they form a list of their own). Criteria for being put on a waiting list for housing differ among the individual cities and republics.

The interminable and ever-lengthening waiting lists illustrate the growing crisis of the housing allocation system. In early 1991, the number of urban families and singles on these lists nationwide reached over 14 million people (23% of all households). Almost three quarters of these people resided in "self-contained" (versus communal) apartments with less than 7 square meters of housing space per person. Two million singles on these lists were living in hostels. About two million families (12% of all households on waiting lists) have been waiting for improvement in their housing condition for over 10 years.

The data on the length of waiting lists and their movement as of early 1990 are shown in **Table 13**. During the first six months of 1991, only 600,000 urban households, representing 4.4% of all families and singles on waiting lists, improved their living conditions and were removed from waiting lists. Note that only the residents who have lived in a city for over five years are eligible for a "permanent residence permit" (*postoiannaia propiska*), thus enabling them to join a waiting list. This implies that many recent arrivals in Soviet cities are not reflected in the above numbers, regardless of whether they have a "genuine need" for housing improvement.²⁵

Waiting lists by themselves, however, are not a very good indicator of housing demand. Joining a list is essentially a cost-free endeavor, and as state-owned housing rents are much lower than the cost of alternative types of housing, there is a strong incentive to do so. Therefore, virtually all households who somehow satisfy the criteria join the queue. Some households misrepresent their living conditions (i.e., by feigning overcrowding by registering relatives who do not actually live in the dwelling).

Waiting lists are not the only way to obtain improved state-owned housing. Apparently occupational status and connections play an important role in the allocation of state-owned housing. Moreover, even though the "ability to pay" is supposedly not a factor for selection, there is strong statistical evidence that household income and other "financial incentives" operating through the second economy, are prime determinants in the allocation of state-owned housing (see Alexeev, 1988 and **Table 14**).

²⁵Most of the data in this paragraph are from GOSKOMSTAT, Press-vypusk 214, July 24, 1991.

TABLE 13
CHANGES IN HOUSING CONDITIONS AND WAITING LISTS
IN URBAN AREAS BY REPUBLICS, 1989

Union/Republic	Number of Households whose Housing was Improved (000's)	Households on Waiting List with Improved Housing		Number of Households on Waiting List as of January 1, 1990	
		(000's)	Percent of Total Households on Waiting List	(000's)	Percent of Total Households
USSR	1,884	1,740	12.5	14,256	23.4
RSFSR	1,264	1,171	13.0	9,156	24.7
Ukraine	245	219	9.1	2,504	22.1
Byelorussia	80	76	12.5	619	28.1
Uzbekistan	45	44	17.8	218	12.3
Kazakhstan	109	98	18.1	547	19.7
Georgia	12	11	8.4	129	16.3
Azerbaijan	18	18	12.7	136	15.4
Lithuania	22	20	14.1	142	16.7
Moldavia	18	15	7.8	216	32.9
Latvia	16	13	9.0	149	21.6
Kirgizia	10	10	11.6	88	19.2
Tadjikistan	12	12	14.6	85	23.2
Armenia	10	10	13.3	113	27.5
Turkmenia	10	10	9.4	113	32.3
Estonia	13	13	28.9	41	9.8

SOURCE: *SSSR v tsifrah v 1989 godu*, p.122.

The housing conditions of young families are the worst of all major demographic groups in the Soviet population. The proliferation of the so-called Youth Residential Complexes (YRC) has been billed as one solution to alleviating the problem. The YRC's are built mostly by their future residents—young people, mostly families, between the ages of 18 and 30—in their free time utilizing the materials and equipment provided by their employers (state enterprises). The employers provide at least part of the financial resources necessary to reimburse the professional building contractors. It is not clear if the state also participates in financing the YRC's directly. Often several enterprises pool their resources in a YRC project.

TABLE 14
RELATIONSHIP BETWEEN HOUSING SPACE AND INCOME - 1989

Housing Space per Person (m ²)	Average Monthly Income per Person for Urban Households (Rubles)					
	75 and less	75-100	100-150	150-200	200-250	250 and more
5.0 and less	22.3	17.0	11.9	7.3	5.5	5.8
5.1 - 7.0	24.2	22.8	19.8	14.8	11.3	9.9
7.1 - 9.0	21.8	23.1	22.3	18.7	15.5	13.2
9.1 - 11.0	15.7	18.8	22.3	23.1	19.8	15.7
11.1 - 13.0	6.7	7.6	8.7	10.3	10.6	9.6
13.1 - 15.0	4.5	5.0	6.7	10.9	14.1	14.1
15.1 - 17.0	2.2	2.2	3.1	5.3	7.4	8.8
17.1 - 20.0	1.4	1.9	2.6	4.7	7.5	10.3
20.1 - 25.0	0.7	0.8	1.4	2.5	4.0	5.5
25.1 - 30.0	0.3	0.5	0.7	1.4	2.4	3.9
30.0 and more	0.2	0.3	0.5	1.0	1.9	3.2
Average useful space per person	10.6	11.4	12.6	14.5	16.6	18.6
Average living space per person	7.7	8.2	8.9	10.2	11.6	12.9

SOURCE: GOSKOMSTAT

The YRC's are supposed to reduce construction costs and to improve housing conditions of young families. However, the free or very cheap labor of the youth participating in the construction is often used by the builders to increase the earnings of the professional construction workers. The YRC brigades are usually assigned to the least "profitable" tasks in the project. From an economic standpoint, if one takes into account the lack of construction skills and the sometimes significant opportunity cost of the future YRC residents, actual cost reductions are questionable.

In any case, the YRC's do not provide a long-term solution to the Soviet housing problem. The accommodations in the YRC's are relatively poor often with only one communal kitchen per floor and no cooking facilities inside the flats. Also, it is not clear what will happen to families as they grow older and larger. There are no guarantees that they would be able to move to more suitable accommodations.

5.7.2 Cooperative Housing

To a large extent cooperative housing is supposed to be allocated on the basis of the ability to pay. The prices of cooperative housing, however, are based on official wholesale construction costs and do not represent true market clearing prices.²⁶ In addition, the state subsidizes the construction of cooperative housing through low interest rate loans (see section 5.3). This results in queuing for cooperative housing as well. As of January 1, 1988 the number of people on cooperative waiting lists reached 1.5 million. Many of these people (36.5% in the Russian republic alone) were also on waiting lists for state-owned housing. At the present rate of cooperative housing construction, it may take up to ten years to provide cooperative housing for every person waiting for it. Moreover, households must meet certain "need" criteria to qualify for cooperative housing, which implies that when such requirements are lifted, as is proposed, more people are going to join the queue.²⁷

A housing cooperative can be affiliated with local councils, enterprises, collective farms, or other public organizations. In order to organize a housing cooperative a group of interested citizens has to petition the housing department of the local municipal authority. They may also organize through their place of employment, coursing their petition through the management and the trade-union committee of the enterprise. A meeting is then convened by the housing department (or the enterprise management together with the trade-union committee) with everyone wishing to join the cooperative. The decision of this general meeting, together with the list of the proposed members and their family members, is forwarded to the executive committee of the local council. The council then either accepts or rejects the general meeting's decision.

²⁶Market clearing prices are prices which result in a balance between the supply of a commodity or service and its demand. The official prices of housing and construction materials in the Soviet Union are too low in the sense that demand at these prices far exceeds the available supply. This results in a shortage. Note that a shortage in economic terms is simply a result of artificially low prices. Therefore, a sure way of eliminating a shortage is to raise prices high enough to bring demand down to the level of supply. This may not always be, however, a politically acceptable action.

²⁷Household need in terms of living space per capita is determined by the republic or municipal authorities. In most places it varies between 5 and 9 square meters per person. The local authorities are allowed to impose additional requirements for cooperative housing eligibility.

The number of cooperative members can vary significantly from one republic to another, as each republic has its own "Guidelines for Cooperative Charters." In the Russian republic, for example, the minimum number of members of a cooperative is set at 60 for Moscow and St. Petersburg, at 48 for the capitals of the autonomous republics and provincial centers, at 24 for all other cities, and at 12 for rural areas. In other areas the minimum number of members necessary to found a cooperative varies from 8 in Ashkhabad, to 10 in Alma-Ata, to 24 in Tbilisi, to 40 in Kiev.

5.7.3 Privately-Owned Housing

The allocation of private housing normally takes place on a market or second economy basis. The primary non-market element impacting the allocation of privately-owned housing concerns the allotment of building plots. The priority for building plots is given to those on waiting lists for housing improvement, especially employees with distinguished work records, retirees, war veterans, and the physically handicapped. Preference is given to those households which transfer their state-owned accommodations to the local council in exchange for a privately-owned house. Generally, though, the allocation of private housing is based mostly on the ability to pay. Obstacles to the private production of housing include the lack of access to construction materials and skilled labor, and poor supporting infrastructure.

5.7.4 System of Residence Permits (*Propiska*)

The Soviet Union uses a system of internal passports as a means to control the movement and distribution of the population. A person is required to have a residence permit in order to obtain a job. In some areas and for some people such permits are relatively easy to obtain, but in many cities it is an extremely difficult process. The *propiska* system is a source of severe inefficiencies and inequities. One of its primary effects has been to keep Soviet peasants in a state of virtual serfdom by preventing their migration to the cities.

Temporary permits are issued for certain industrial sectors and cities which, for whatever reason, experience a particularly severe labor shortage. Typically, it takes at least five years to turn a temporary permit into a permanent one. While a temporary permit is sufficient for employment, it does not qualify a person for permanent housing allocation or purchase. The system of residence permits forces people to live in hostels or rent rooms from private individuals for years. In 1989 worker hostels provided shelter for almost 8 million laborers and, quite frequently, their families.²⁸

Enterprises located in the cities trying to control their population growth are required to pay the city a fee for each additional person they hire. This fee presumably represents the

²⁸Strictly speaking, Soviet regulations do not permit the housing of families in hostels, but these regulations are often ignored by local authorities and hostel management.

cost to the city of housing and other services for the additional employees. Reportedly, this charge in the case of Moscow in 1990 was 30,000 rubles (US\$5,000) (IMF, 1991).

According to the Soviet newspaper *Izvestiia* (October 14, 1991), the Soviet Committee of Compliance with the Constitution (*Komitet konstitutsionnogo nadzora*) proclaimed the institution of *propiska* unconstitutional. While registration of residence may still be required, the citizens do not have to obtain permission to reside anywhere outside of military bases and border settlements. However, the Committee's decision relates only to prior Union legislation. In order to obtain real force this decision will need to be confirmed by the legislatures of the various republics.

6 HOUSING FINANCE AND FINANCIAL SYSTEMS

Most housing construction in the USSR is still financed by the state. In 1989 the direct investment by both the state and state enterprises comprised 77% of the total investment for housing. Public organizations such as trade unions, housing cooperatives, individuals, and collective farms provided the balance. The breakdown of housing investments and construction by the source of financing since 1986 is presented in Tables 15 and 16.

Year	State		Other Public Organizations		Cooperative		Private		Collective Farms		Investment	
	In-vestment	% of Total	In-vestment	% of Total	In-vestment	% of Total	In-vestment	% of Total	In-vestment	% of Total	In-vestment	% of Total
1986	23.6	76.4	0.3	0.9	1.5	4.9	2.8	9.0	2.7	8.7	30.9	100
1987	25.9	77.3	0.2	0.6	1.6	4.8	3.3	9.8	2.5	7.5	33.5	100
1988	27.2	76.4	0.3	0.8	1.6	4.5	4.1	11.5	2.4	6.7	35.6	100
1989	28.3	77.3	0.3	0.8	1.5	4.1	4.3	11.7	2.2	6.0	36.6	100

SOURCE: *SSSR v tsifrakh v 1989 godu*, p.113.

Since the beginning of 1991 the Soviet government has tried to limit the role of central budget financing to only those projects of special importance for the entire economy. To this end, the government created the Fund for Economic Stabilization which was supposed to be the only source of centralized investment financing.

6.1 Direct Investments from the State Budget

Direct investments from the state (i.e., Union) budget have been the primary source for housing construction in the past. These investments, in turn, were managed by the city councils or state enterprises. The state disbursed financial resources to the councils which contracted for construction with builders. Historically, central budget allocations have also gone to enterprises and organizations which may or may not supplement these appropriations with internally generated funds.

TABLE 16
HOUSING CONSTRUCTION BY SOURCE OF FINANCING
 (million square meters of useful space)

Year	State		Other Public Organizations		Cooperative		Private		Collective Farms		Investment	
	In-vestment	% of Total	In-vestment	% of Total	In-vestment	% of Total	In-vestment	% of Total	In-vestment	% of Total	In-vestment	% of Total
1986	85.3	71.2	0.9	0.8	8.2	6.8	17.4	14.5	8.0	6.7	119.8	100
1987	94.3	71.8	1.0	0.8	8.9	6.8	19.3	14.7	7.9	6.0	131.4	100
1988	92.6	70.0	1.0	0.8	8.7	6.6	22.7	17.2	7.3	5.5	132.3	100
1989	89.6	69.5	0.9	0.7	7.8	6.1	23.7	18.4	6.4	5.0	128.9	100
Urban Areas												
1986	66.5	81.1	0.6	0.7	7.9	9.6	6.8	8.3	0.2	0.2	82.0	100
1987	73.8	81.9	0.6	0.7	8.6	9.5	6.9	7.6	0.4	0.4	90.3	100
1988	73.9	80.6	0.7	0.8	8.5	9.3	8.1	8.8	0.5	0.5	91.7	100
1989	71.5	80.7	0.6	0.7	7.6	8.6	8.5	9.6	0.4	0.5	88.6	100
Rural Areas												
1986	18.8	49.7	0.3	0.8	0.3	0.8	10.6	28.0	7.8	20.6	37.8	100
1987	20.5	49.9	0.4	1.0	0.3	0.7	12.4	30.2	7.5	18.2	41.1	100
1988	18.7	46.1	0.3	0.7	0.2	0.5	14.6	36.0	6.8	16.8	40.6	100
1989	18.1	45.0	0.3	0.7	0.2	0.5	15.7	39.0	6.0	14.9	40.3	100

SOURCE: *SSSR v tsifrakh v 1989 godu*, p.114.

Four state-owned banks have traditionally provided the financing for housing construction: the Industrial Development and Construction Bank (*Promstroibank*) which controls 32% of all state financing of housing, the Housing and Municipal Service and Social Development Bank (*Zhilsotsbank*) which controls 29% of the total, the Agro-Industrial Bank (*Agroprombank*) - 23% of the total, and the Savings Bank (*Sberbank*) - the remaining 16%.²⁹ These banks normally do not serve as financial intermediaries making loans directly to households. In fact, they often do not make any loans at all. Entities receiving state financing for housing construction are allowed to open an account in a state bank. Payments from this account then go to the contracting organization (builder). The main purpose of the bank is simply to provide financial control over the construction process. State banks, however, are allowed to make loans to contracting organizations that have been selected to build housing for either a state enterprise or a private individual. Currently, with the

²⁹The information in this paragraph comes mainly from *A Study of the Soviet Economy*, v. 3, IMF, World Bank, OECD, and EBRD, 1991.

breakup of the central ministries, most of the banks are in the process of conversion into stock companies whose shareholders include other state banks or enterprises.

Recent studies report that the volume of direct state expenditures on housing construction, maintenance, and operation has approximately equaled the combined volume of rents and income taxes (currently 13 percent of cash wages) collected by the state over the period 1922-1985. Though never publicly stated as an explicit policy decision of the Soviet government, Bessonova (1988), whose argument is summarized in English by Andrusz (1990), maintained that the goal of the income tax system has been to centralize resources for development of the housing sector. This argument has been generally accepted by specialists in Soviet housing.

The breakup of the union ministries had a dramatic impact on the Soviet housing financing system. The recent virtual disintegration of the Soviet Union has all but eliminated traditional central budget sources with the exception of monetary emission and some foreign trade income.³⁰ For this reason, centralized investments will no longer play a significant role in housing construction. It must be mentioned that the role of the central budget in housing financing has been rapidly declining since early 1990. Even prior to the August 1991 coup attempt the bulk of state financing had been channelled through budgets of state-owned enterprises. Nonetheless, some centralized investments in housing remained until very recently. Presumably, at the present time the functions which used to be performed by the central government budget have shifted to the republic budgets. Since the republic governments will no longer transfer resources (taxes and enterprise profits) to the union government, they cannot expect to receive sizeable centralized budget allocations for housing from the center anymore. Moreover, the republic governments are no longer obliged to incorporate the housing construction plans of enterprises belonging to the union ministries into their own plans.

Local government has also received a greater authority to introduce local taxes and to determine the patterns of spending of the resources available to them.³¹ The cities also have acquired the power to influence the housing plans of the enterprises located on their territory. Finally, recent republic decrees authorize municipal authorities to receive a major portion of the proceeds from privatization of state-owned housing. In most cities these proceeds are supposed to be spent primarily on construction of new state-owned housing.

³⁰Even these income sources appear to have been eliminated by the Russian republic government in mid-November 1991.

³¹Until recently the USSR had only three types of local taxes—a tax on buildings, land, and motor vehicles. However, the proceeds from these taxes were taken by the union government. The recent law "On General Principles of Local Self-Management and Local Economies in the USSR" permits the local councils of people's deputies to impose additional local taxes, fees, and tariffs, which they can use at their own discretion. This right is confirmed by the Russian republic law on local budgets.

In sum, the role of the union government in the housing area has been eliminated. The republic governments have preserved a measure of authority in housing construction, while the role of municipal governments has been enhanced. At the same time, of course, the general tendency to marketization of the Soviet economy will be reflected in the increasing importance of individual and cooperative financing of housing construction.

6.2 Enterprise Funds

State-owned enterprises and organizations finance their housing construction from two sources—directly from the state budget and from the funds accumulated out of their retained revenues. Of course, as long as these enterprises are state-owned their internal funds should be considered as part of overall state financing. Nonetheless, with the increasing autonomy of Soviet enterprises and organizations, and particularly the prospect of their privatization, the immediate source of financing acquires special importance.

One of the problems with enterprise financing of housing is the significant variation, given the Soviet system of artificially set prices, in the varying profitability of different enterprises. More importantly, state enterprises differ with respect to the amount of resources (investments and subsidies) they receive from the state. For example, light manufacturing and food processing until recently have received relatively few resources from the state and, therefore, have built far less housing for their workers than enterprises in other industries (see Table 17).

TABLE 17 STATE INVESTMENT IN HOUSING BY SELECTED ECONOMIC SECTORS		
Sector	Square meters built per employee	
	1965	1982
Energy and electrification	1.95	2.49
Chemical and petro-chemical	0.90	1.36
Ferrous metallurgy	0.50	0.81
Building materials industry	0.15	0.54
Light industry	0.09	0.22
Food processing	0.09	0.19
Agriculture	0.01	0.17

SOURCE: *Alekseev* (1987), cited in *Andrusz* (1990), p.265.

Recently, the most important development in the pattern of investment financing in the country as a whole has been the decentralization of the investment process (see section 7). With respect to state financing of housing construction this implies a greater emphasis on enterprise funds at the expense of central investment allocations. While 52% of all housing space in 1988 was financed directly from the state budget, only 31% was targeted to receive centralized financing in 1990. During this same period the share of housing financed from the funds of state enterprises increased from 17% to 36%. The ramifications of this shift in financing indicate a greater role for local constituents, such as enterprise workers and consumers in general, in setting investment priorities.

As noted previously, the continued importance of enterprise funds is, of course, in contradiction with the goal of transferring all state-owned housing to the municipal authorities. Enterprises have been delegated a greater role in building an increased share of urban housing, but have not been given the responsibility to provide supporting infrastructure. This will need to be resolved, perhaps by requiring enterprises to devote a certain share of their resources to the provision of supporting facilities and infrastructure when undertaking a housing construction project.

In addition to using existing internally-generated funds, an enterprise can indirectly obtain financing from a state bank.³² The bank normally lends to the construction organization, not to the enterprise. The enterprise, however, is required to make a downpayment. The downpayment is normally equal to 30% of total project cost, but is reduced (usually to 20%) for some categories of enterprises such as those which produce consumer goods, and for housing construction in the Far North, Far East, Kazakhstan, Siberia, and mining towns.³³

6.3 Housing Cooperatives

Historically, housing cooperatives have received little funding, given the higher priority placed on other housing investment. Lately, a significant role in solving the housing shortage has been assigned to the HCC's, though in 1989 cooperative construction still accounted for only 6.1% of the total construction of housing in the USSR. Among the republics, the share of cooperative housing construction reached 15.9% of the total in Lithuania, 13.6% in Byelorussia, and 11.9% in Georgia and Estonia. In comparison, cooperative construction

³²A point worth considering is that by shifting much of the responsibility for housing construction to the enterprises the state is in effect moving housing investment off budget. To the extent that enterprises are financing this construction through additional loans (because they are subject only to soft budget constraints), then the banking system is financing the construction—leading to further macroeconomic problems.

³³The recent attention devoted to mining towns is due in part to an increasing awareness of the very poor housing conditions prevailing in such areas. This was dramatically brought to the attention of the central authorities by the massive strikes in 1989 and again in 1990, organized by the miners' trade unions that wield considerable political strength.

plays an insignificant role in Kazakhstan, Tadjikistan, Turkmenia, and in some regions of Russia (Amur, Kirov, Irkutsk, Samara, Smolensk, Ulianovsk provinces), where the population is poorer than the Soviet average.³⁴

HCC's usually contract for housing construction with state construction enterprises, which charge HCC's the same wholesale prices that they charge state organizations. As previously noted, these prices are set below market clearing levels.

The members of HCC's are subsidized through state-sponsored low interest rate (0.5% per year versus current estimates of inflation of at least 100%) long-term loans which finance 70% of the cost for 25 years (80% in Kazakhstan, Siberia, Far East, Far North and in the mining towns). In addition, the expenditures for preparing a site for construction and for extending utility services to the site are borne by the local executive committee.

The loans to the HCC's are advanced by specialized banks such as *Zhilsotsbank* and *Sberbank* (see section 5.1). To pay off the loans the HCC members make monthly payments to the HCC. The HCC in turn makes quarterly payments to the bank. A 3% interest rate is charged on overdue payments.

6.4 Individual Private Construction

Private housing construction takes place on a much smaller scale than the state-owned housing construction, and accounted for only 18.4% of all housing construction in 1989 (Table 16). In rural areas, private houses can be built by state inter-farm contracting organizations³⁵ or by individuals. An individual may enter directly into a contract with a builder. In cities, however, the individual's place of work (enterprise) or the local council's executive committee enter into this contract on behalf of the individual.

The regulations on the financing of individual housing construction were significantly changed by the Soviet government in a February 11, 1988 decree entitled "On the Measures to Accelerate the Development of Individual Housing Construction." According to this decree, rural residents wishing to build a new house can obtain loans of up to 20,000 rubles (US \$3333) for 50 years with payments starting in the third year. It is also possible to obtain up to 4,000 rubles (US \$666) for housing improvements. The payments here also start in the third year and stretch over 10 years.

³⁴While higher levels of cooperative construction activity normally correspond to higher income levels in certain republics, this alone does not explain the differences of HCC activity among the republics. The attitudes of the local authorities toward housing cooperatives also play a significant role.

³⁵Construction enterprises set up by the state to service the needs of groups of collective farms.

Urban residents can obtain up to 20,000 rubles for 25 years for a new house and up to 3,000 rubles for 10 years for improvements and reconstruction. In both cases the payments start in the third year. Urban residents can also obtain up to 20,000 rubles for 25 years for the purchase of an existing home. Here payments start in year one. The interest rate is 2% annually for rural residents and 3% for urban dwellers. Physically handicapped individuals, veterans of World War II, and survivors of military personnel killed in action pay no interest on these loans. No independent confirmation was possible regarding the extent to which loans to private individuals are being made in urban and rural areas.

If a loan is used for a purpose other than housing construction, repair, or purchase, the state bank (*Sberbank* is the state bank most involved in lending to individuals) can call in the loan and charge 12% interest on the outstanding balance. Enterprises can also help with payments on loans taken by employees for home building or home improvement. These funds come from the enterprise's fund for social development. The size of the enterprise's contribution is determined on the basis of the employee's seniority at the enterprise.

Recently, the government has permitted the sale of unoccupied houses in rural areas to urban dwellers for seasonal or temporary use as long as they contract with a state farm or enterprise for delivery of agricultural produce. In addition, all "unjustified" restrictions specific to private housing construction (such as the prohibition to build individual housing in the cities with population over 100,000) have been lifted. Urban dwellers have been allowed to acquire plots for houses in suburban areas. Efforts are underway to revise the General Plans for City Development in order to provide supporting infrastructure for newly zoned areas for individual housing construction.

6.5 Cost Recovery Mechanisms for the Maintenance of State-Owned Housing

The Soviet system of rents in state-owned housing has remained essentially the same since 1928. In those days rents were differentiated according to household income, but wage inflation over time has eliminated most rent variations. The basic monthly rent is either 13.2 kopeks or 16.5 kopeks per sq. meter (10.76 sq. ft.), depending on the size of the city.³⁶ Rentals do not take into account location inside the city or the quality of housing. The only exception is the rent charged for occupancy in high-rises, which is set at 30 kopeks per square meter (US \$0.05).

Rent is charged only for "living space," which excludes kitchens, bathrooms, and other auxiliary areas. Households which have more than 12 square meters per person (plus 6 square meters per family) have to pay triple the usual rate for the excess space. The average monthly rent per square meter reached 1.59 rubles in 1988.

³⁶There are 100 kopeks in a ruble.

A common claim of the Soviet statistical agency is that the population's payments for housing cover less than one quarter of state expenditures on maintenance. According to *Zhilishchnye* (1990), state subsidies for operation and maintenance amounted to 11 billion rubles in 1989 (a small drop from 11.4 billion rubles in 1988). Kolotilkin (1990), a Soviet specialist on housing finance, has however disputed these claims, arguing that if one includes rent for non-residential areas (stores, storage) in otherwise residential buildings, amortization payments by the housing administrations of enterprises, ministries, and city councils, as well as other payments, the subsidies would almost disappear. More than half of additional payments cited by Kolotilkin, however, come from state-owned enterprises and, therefore, represent a form of state subsidy to the individual renters.³⁷

Rental payments constituted less than 3% of average household income in 1990. Taking into account utility payments and payments for routine repairs, this percentage would approximately triple.³⁸ In any case, the cost of state-owned housing remains much lower than the cost of cooperative or individual housing of comparable size and quality.

Incomes and expenditures of state-run housing maintenance (municipal and enterprise) organizations are shown in **Tables 18 and 19**. These figures illustrate that the state enterprises tend to subsidize operation and maintenance to a greater extent than from the municipal maintenance organizations. The rationale is that enterprises, which have greater resources, can better afford the subsidy. Specialized municipal organizations, however, may be somewhat more efficient at maintaining housing stock.

Housing subsidies accrue to the households according to the amount of housing they possess. Some researchers claim that housing inequality exacerbates income inequality while others argue that this is not necessarily true.³⁹ The waiting lists described in section 4.7.1, however, clearly demonstrate that the price of state-owned housing is far below market clearing levels.

Despite the low rent, many tenants fall behind in their payments. In 1989 overdue rents amounted to 307.9 million rubles or 13.7% of total projected annual rental payments (Boiko, 1991). This statistic testifies to the extreme poverty of a significant percentage of state-owned housing tenants. This shortfall in payments is exacerbated by the virtual impossibility of evicting a family from state-owned housing.

³⁷The housing management organizations reimburse the state for part of the costs of reconstruction and major repairs. They also cover part of their deficits from rental payments for non-residential housing users.

³⁸ Routine repair is the responsibility of the tenants.

³⁹See Rutgaizer and Sheviakov (1987) for the first point of view, and Alexeev (1988, 1990) for the second.

TABLE 18
INCOME AND EXPENDITURES OF HOUSING MAINTENANCE
ORGANIZATIONS OF LOCAL COUNCILS
 (per square meter of living space)

	1985 Income			1989 Income		
	Total	Rental Payments	Expenditures	Total	Rental Payments	Expenditures
USSR	3.18	1.59	3.39	3.30	1.60	3.67
RSFSR	3.29	1.65	3.69	3.46	1.67	3.97
Ukraine	3.30	1.51	3.05	3.07	1.51	3.52
Byelorussia	2.70	1.51	2.85	3.23	1.51	2.46
Uzbekistan	2.50	1.65	2.49	2.66	1.69	2.80
Kazakhstan	2.70	1.59	2.86	2.99	1.61	3.38
Georgia	3.07	1.53	3.28	3.64	1.56	3.64
Azerbaijan	2.78	1.53	3.12	3.13	1.59	3.51
Lithuania	2.99	1.61	3.57	3.20	1.63	3.73
Moldavia	2.76	1.64	2.81	2.86	1.71	3.03
Latvia	3.90	1.03	3.65	3.85	1.01	3.46
Kirgizia	2.20	1.55	2.49	2.32	1.54	3.49
Tadjikistan	2.36	1.59	2.33	3.01	1.60	2.99
Armenia	2.31	1.21	2.88	2.26	1.11	3.40
Turkmenia	2.16	1.55	2.46	2.28	1.56	2.54
Estonia	4.31	1.62	3.91	5.31	1.63	2.61

SOURCE: *ZHILISHCHNYE* (1990), p.105.

NOTE: Total includes utility payments and payment for routine repairs.

6.6 Major Repairs of Housing

Financing of major housing repairs is provided by the institutional owners. For example, enterprises repair the housing they own while cooperatives finance the repairs out of members' dues. Expenditures on major repairs came to 4.3 billion rubles (US \$717 million) in 1989, representing an almost two-fold increase since 1980. Approximately one million housing units (about 576 million sq. ft. of housing space) underwent major repairs.

According to GOSKOMSTAT, the average cost of major repairs rose from 23 rubles per square meter in 1980 to 80 rubles in 1989. The corresponding 1989 figures for the Baltic republics were in the 120-145 rubles range due to a higher proportion of older housing, in need of repair, in these republics.

TABLE 19
INCOME AND EXPENDITURES OF
HOUSING MAINTENANCE ORGANIZATIONS OF
FINANCIALLY AUTONOMOUS (KHOZRASCHET) ENTERPRISES
 (per square meter of living space)

	1985 Income			1989 Income		
	Total	Rental Payments	Expenditures	Total	Rental Payments	Expenditures
USSR	2.48	1.61	7.83	2.98	1.54	9.52
RSFSR	2.56	1.64	8.20	3.10	1.56	10.17
Ukraine	2.47	1.54	6.65	2.87	1.50	7.68
Byelorussia	2.08	1.50	6.29	2.93	1.47	9.25
Uzbekistan	2.30	1.75	7.14	2.53	1.63	7.15
Kazakhstan	2.16	1.49	7.75	2.53	1.48	8.30
Georgia	3.35	1.56	8.35	3.93	1.47	8.62
Azerbaijan	2.06	1.43	5.53	2.31	1.07	5.70
Lithuania	1.90	1.56	5.96	2.23	1.49	7.80
Moldavia	2.29	1.78	7.93	3.01	1.62	11.06
Latvia	1.90	1.11	6.58	2.44	1.01	8.92
Kirgizia	2.04	1.52	6.22	2.41	1.36	6.24
Tadjikistan	2.17	1.75	7.06	2.44	1.78	6.68
Armenia	1.53	1.12	5.89	1.57	0.87	5.66
Turkmenia	2.23	1.59	7.55	2.93	1.67	7.88
Estonia	2.31	1.70	7.58	2.68	1.76	8.74

SOURCE: *Zhilishchnye* (1990), p.106.

NOTE: Total includes utility payments and payment for routine repairs.

Major repairs can be either "complete" or "partial." During complete repairs, a significant part of the entire building and mechanical plant are restored. This type of repair may include the remodeling of communal apartments into self-contained units. Partial major repairs only address a few particular elements of the building and/or equipment. The need for two different kinds of major repairs has to do with the unequal longevity of the building's components. Complete repairs are supposed to be performed every 18 to 30 years depending on the type of the building. Partial major repairs are scheduled every 6 years.

7 THE CONSTRUCTION AND BUILDING MATERIALS INDUSTRY

Since the first five-year plan in the late 1920's, the Soviet economy, by international standards, has been characterized by an unusually high rate of investment in the housing sector. Traditionally the share of construction and installation expenditures in Soviet capital investments has exceeded 50%. Naturally, the Soviets have had to create a large construction industry in order to support this investment program.

Since 1990, however, the volume of investments in the USSR in the housing sector has been declining and the performance of the construction industry has deteriorated. This decline is the end result of an industry that is characterized by large, monopolistic state-owned enterprises, an inefficient reward system, obsolete equipment, shortages of skilled labor and little technological innovation. Projects typically suffer long delays and are of poor quality, with a large number left unfinished due to the fragmentation of resources among too many projects. Together with the entire Soviet economy, however, the construction industry is undergoing a process of structural reforms aimed at helping the industry overcome these problems and improve performance.

The main trends in the Soviet construction industry are the increasing decentralization of investment, the shift of investments away from the "productive" sector to the "non-productive" sector,⁴⁰ the decline of the state-owned construction enterprises, and the growth of the cooperative sector. In recent years, the construction industry has experienced a proliferation of institutional and administrative changes and the adoption of numerous new laws and regulations designed to make the industry more market-oriented.

Housing, as a sub-sector of construction, accounted for 16.5% of all capital investments in 1989. The housing industry shares all the problems of the construction industry in general. It should be emphasized, however, that the housing industry stands to be the primary beneficiary of the construction industry's trend toward decentralization, the investment shift toward the non-productive sector, and the introduction of market-oriented reforms.

⁴⁰According to the Soviet classification system, investments are divided into either the productive or non-productive sector of the economy. This classification is sometimes difficult to follow, but roughly speaking, the productive sector includes the production of all goods and related services. The non-productive sector consists of consumer services, as well as other subsectors such as housing, education, medical services, and public transportation.

7.1 Structure of the State-Owned Construction Industry

Traditionally, the administrative structure of construction in the USSR has been quite complicated and has historically experienced less stability than most other sectors of the economy. Until recently, the Soviet Union's construction industry was overseen by a supra construction ministry or committee (GOSSTROI). This ministry was divided into a number of operating branches or contracting construction entities (*podriadnye*): (1) "trusts" or "associations"; (2) "construction-installation administrations"; (3) "*kombinats*" (usually for housing construction); and (4) "production and technological acquisition administrations" (*upravlenie proizvodstvenno-tekhnicheskoi komplektatsii*).

Since the mid-1980's the Soviet government passed a number of decrees affecting the administration of the industry. The main goals of these decrees included the following: 1) relieving the central authority of micro-management and increasing the autonomy of construction enterprises; 2) strengthening the role of contract or negotiated prices (*dogovornye tseny*);⁴¹ and, 3) increasing the mutual responsibility of all participants in the project for achieving the final results.

Until 1986 the main federal administrative organ in construction was the State Committee on Construction Affairs. In 1986 it was transformed into the Union-Republic State Construction Committee (Gosstroi USSR), and given the status of a subdivision of the Council of Ministers of the USSR. Its responsibilities included administration of the activities of the union and republic construction ministries, coordination of the Gosstrois of the republics and the autonomous republics (established in 1962-1965), and implementation of unified technological policy and improvements to the system of incentives in the construction sector. The importance of Gosstroi USSR was underlined by the appointment of a Deputy Chairman of the Council of Ministers of the USSR as its director. However, due to the decentralization trend in the Soviet government, in 1988 Gosstroi lost much of its importance and was transformed into a committee on norms and technology without any responsibility for directing the activities of the various ministries with responsibility for construction.⁴²

⁴¹Contract or negotiated prices are prices which the contractor negotiates with the client on a specific project as opposed to the fixed prices set by the state pricing committee. The contract prices, however, have been subject to various regulations and restrictions and until recently had not been allowed to be set outside of a range established by the central authorities for various projects.

⁴²The planning of the activities of Soviet construction, as well as other industrial sectors, is conducted according to a plethora of norms specifying, for example, wages paid per unit of output, levels of particular inputs and so on. Needless to say, certain norms are more important than others in evaluating the performance of the enterprise. Usually, the enterprises would strive to achieve only the most important norms at the expense of others. The main indicators of enterprise performance, however, are fulfillment of planned targets for profitability and the physical volume of output. It should be noted that profitability is strongly affected by the rather arbitrary structure of state-controlled prices and by the degree of availability of crucial inputs. In other words, the rates of profit for state-owned enterprises are not particularly relevant regarding the real contribution of the enterprise

Until recently, the bulk of the state-owned construction industry has been managed by various ministries organized according to the type of construction they perform, the region where they operate, or the major project they work on. Almost all of these ministries, especially at the union level, have been disbanded in the last 2-3 years. In addition to the union ministries that previously engaged in construction, there are also contracting construction organizations subordinated to the executive committees of the local councils (municipal authorities), contracting organizations of various branch ministries and administrations.

The combined total of local and ministerial contracting (*podriadnye*) construction organizations account for 90% of the construction volume in the USSR. These are more or less permanent operations. The other type, the *khoziaistvennye* (literally "economic") construction organizations are set up for a specific task or project. The main financially autonomous⁴³ contracting units in Soviet construction are "construction-installation trusts" and "construction-installation associations" (the Russian acronym SMO). The trust is composed of "construction-installation administrations", the "administration of production and technological acquisitions", and some other divisions depending on the specifics of the trust's work.

Typically, a trust is the main contractor on a particular construction project. The trust either owns equipment and transport through its subdivisions, or leases it from specialized subdivisions of other construction administrations. It is the role of a trust to coordinate the activities of all project participants. The decisions of the trust management with respect to construction activities and the specific timetable for construction completion (within the existing general plan) take precedence over all participants irrespective of their normal subordination to a particular ministry.

Construction-installation trusts, associations, and other organizations of the same level (such as housing construction groups, factory construction groups, and construction-installation trusts) have the legal status of a state production enterprise and operate on the principle of complete self-accounting (*khozraschet*). They have their own budget, bank account, and charter fund (*ustavnyi fond*).

The main subdivisions of the trust are the "construction-installation administration" (the Russian acronym SMO) and the "mobil mechanized column" (PMK). These subdivisions do not have the legal rights of a state enterprise and work strictly as subdivisions of a trust.

to the economy at large.

⁴³The degree of financial autonomy of these enterprises is quite limited. The term "financial autonomy" here is used to denote a *khozraschet* unit. *Khozraschet* implies a certain degree of financial independence, which differs among enterprises.

They do, however, have separate budgets and separate bank accounts and can enter into contractual agreements with individual consumers, suppliers, and other organizations.

A significant number of construction organizations—mainly in the area of housing and other consumer oriented construction—is subordinated to the executive committees of the local councils (municipal authorities). The largest cities have "main construction administrations"—umbrella organizations for the housing contracting construction organizations. Some of the largest are Glavmosstroi and Glavmosinzhstroi (Moscow), Glavleningradstroi and Glavlennzhstroi (Leningrad/St. Petersburg), Glavkievgorstroi (Kiev), Glavtashkentstroi (Tashkent), and Glavmosoblstroi (Moscow Province).

In addition, there are approximately 550 technically obsolete and inefficient enterprises specializing in housing construction (*kombinats*) utilizing large panel construction technology in the production of building materials. Often times, these *kombinats* are involved in actual construction as well. These enterprises have an annual production capacity of 689 million sq. ft., which accounts for almost 60% of state housing construction (70% in the cities). There are three basic types of *kombinats* in the USSR. One type produces 1-5 story walk-ups, the second produces 5-9 story buildings, and the third specializes in 10-22 story units. Approximately three quarters of housing produced by these enterprises consists of five- to nine-story buildings. Five-story walk-ups account for more than a quarter, while buildings with six or more floors constitute almost half of all state-owned housing production.⁴⁴

A protracted period of neglect of alternatives to large panel construction has led to a stagnation in the non-LPC building materials industry and to the deterioration of alternative building skills. This situation, however, is apparently beginning to change. There is heavy pressure being placed on the *kombinats* at the Russian Republic level to change their designs radically. For example, Glavmosstroi, the large Moscow construction enterprise, is going to begin the construction of single family units.

⁴⁴There are, however, several variations on this organizational scheme for the Soviet construction sector. First, associations may include trusts in their structure. Often trusts are not subordinate to a construction ministry but to a non-construction ministry or to a large city (e.g., Moscow, Leningrad) government. Some non-construction organizations or municipal administrations may include a construction-installation administration or a *kombinat*. Also, some organizations may be directly subordinate to a republic council of ministers. Lately, all of the construction ministries have been abolished and the trusts and organizations are supposed to be largely autonomous or subordinate to the republic authorities. There are also private construction organizations which do not belong to any government administrative structure. These are mainly construction cooperatives which operate on the basis of contracting with whomever is willing to pay.

7.2 Current Practices of Construction Contracting

Recent changes in the Soviet construction industry have reduced the role of central planners, while strengthening the importance of the negotiated contract between construction enterprises and clients. The construction contract agreement (*dogovor podriada*) has become the main legal document regulating the actions of involved parties, prescribing rights and responsibilities, and (together with existing laws) the punitive measures for inadequate or incomplete performance.

The new weight given the construction contract calls for new approaches in contract negotiation, particularly in light of the decreased importance of centralized investments and planning. In the past, most pre-contract negotiations took place at the level of Gosplan USSR, ministries and their departments. Decisions at this level determined the main parameters of a given project, including the level of effort, total amount of investment, selection of contractors, project phasing, and the provision of technical documentation and supplies. Following recent changes, building contractors (primarily trusts but other entities on occasion) now have the responsibility to decide their own construction programs, find suppliers of construction materials, and secure financing for subcontractors. Additionally, they now have the responsibility of evaluating the performance of their subcontractors.

The building contract covers the startup of operations and the entire period of construction. Payment(s) are made only after the project is finished within the time period specified in the contract, or at pre-specified stages or phases of construction.

Changes have occurred in the financing of investment projects as well. Previously, the state would strictly regulate the actions of local councils, enterprises or other entities. State banks specializing in construction would not provide financing unless all the numerous, and rather onerous, regulations of Gosplan USSR, ministries or republic Councils of Ministers were observed. Currently the union government controls only the investments made out of the Fund for Economic Stabilization.

Financing of construction projects undertaken by an enterprise on its own can also be accomplished through a loan from a commercial bank (see section 7.3). Enterprises can directly open an account in a commercial bank. Payments to the various contractors and subcontractors are made through this ordinary account. Recently, commercial banks considerably simplified the paperwork involved with these accounts and expanded their range of client services.

The new rules allow many different entities to participate in either productive or non-productive sector construction projects. Client groups can include enterprises owned by the state, individual citizens (both Soviet and foreign), social and religious organizations, partnerships, joint ventures, etc. In addition, public authorities at the federal, republic, or

municipal level can act as clients on projects designed to fulfill state needs. These public authorities are allowed to delegate the status of "project client" to an existing or newly-created project-specific legal entity.

Project clients make project construction decisions, fulfill contractual obligations, accept (or do not accept) the finished project or its stages in accordance with the terms of the contract, and settle accounts with the contractor. The client is allowed to delegate the rights for managing a contract to another legal entity, who will act on the client's behalf. The final responsibility for fulfilling the terms of the contract, however, rests with the client.

The role of the contractor can be played by construction-installation enterprises and other enterprises and organizations that have been awarded the right to undertake project construction, and by intermediaries who take on a coordinating function. This latter type of entrepreneurial activity is now allowed, to varying degrees, under new federal and republic laws.

As the construction industry undergoes transformation to a market-oriented system, attention has been given to the introduction of bidding for contracts. Gosstroj USSR developed a Temporary Regulation on the procedures for organizing and conducting contract bidding (*tendera*) for construction projects. This Regulation defines the procedures for preparing, announcing, and conducting bidding for construction contracts, including procedures for the utilization of foreign currency accounts. It is unclear if this Regulation has yet been implemented.

7.3 The System of Rewards in the Construction Industry

Due in part to an incentive structure which rewards gross volume output, the Soviet construction industry is plagued by unfinished projects, high costs and a low rate of labor productivity. The existing system of rewards creates strong incentives to produce homogeneous products on a mass scale, and to resist innovations in design and technology. With this system, construction enterprises are interested in taking on more expensive projects and have little incentive to minimize costs. Frequently, it is advantageous to use costlier methods because the rewards are correspondingly higher (Morton, 1980). In the past, cost overruns often did not present a major problem for the contractor, since the client, being a state entity, could request additional resources from the state budget to cover project cost overruns.

As an additional bonus, housing construction enterprises receive 10% of all housing units that are produced under contract with state-owned enterprises or municipal authorities for their employees. This benefit does not exist in contracts with housing cooperatives, a fact that contributes to construction enterprises' reluctance to build cooperative housing.

7.4 Quality of Workmanship

The local monopoly position of the construction enterprises, combined with the acute shortage of housing and the perennial fixation on "fulfilling the plan", contributes to the notoriously poor quality of Soviet housing. Future tenants of state-owned housing have only a limited input in the acceptance of the finished unit. Municipal authorities who serve as the client are not particularly interested in the quality of workmanship. Not surprisingly, the quality of units produced for enterprises or for housing cooperatives, whose members themselves are prospective residents, is significantly better than that of housing built for municipalities.

Reportedly, households moving into new state-owned housing have to spend an average of 10% of production costs to fix construction and finishing defects in the unit. It is not unusual for a new apartment to lack such "details" as a bathtub or doorknobs. Some apartment buildings remain empty for months after the housing commission has accepted the project as completed in order to allow the builders and the tenants to repair the most important defects and/or complete the units.

The situation seems to be particularly bad in the countryside. The chairman of one district council in a rural area of the Kirov province complained that (quoted from Andrusz, 1990, p. 273)

...in the best cases, the builders put up the walls and add the roof. Decoration, pipe-laying and underground systems are left unfinished with the tenants themselves digging trenches and laying pipes without proper heed to sanitary requirements. As a consequence water leaks, under-heated homes, cuts in the water flow and so on are common occurrences.

7.5 Construction Costs

The reward structure of the construction industry and the accommodating behavior of state-affiliated clients are partially responsible for the rapid increase of housing construction costs in the USSR (see section 6.3). In general, however, it is difficult, for a number of reasons, to evaluate real increases in Soviet housing construction costs over the years. First, Soviet prices are rather arbitrary and do not reflect relative scarcities in the economy. Second, the real cost of housing varies significantly among the regions of the country and even within the same city. Therefore, the geographical composition of new housing would affect average housing costs. Third, housing cost increases are due in part to the increased provision of amenities in recently built housing and the rising average height of buildings.

One peculiarity of Soviet construction costs has to do with the dominant position of large panel construction technology. This technology requires a housing construction organization to build 3,000-4,000 housing units per year in order to break even. While large production runs make this housing approximately 20% cheaper overall than brick technology, the use

of large panel technology in small cities and in rural areas makes housing there about 25% more expensive to produce than in larger cities.

Despite steady growth over the years, Soviet wholesale construction prices have remained significantly below market-clearing levels. This situation has been somewhat alleviated by a dramatic wholesale price increase in early 1991 when the cost of 1 square meter of housing went from 260-300 rubles to 900-1000 rubles (in official prices). Despite this steep climb, official costs continue to be well below the per square meter prices reflected in the bids at private housing auctions.

7.6 The Building Materials Industry

The Soviet building materials industry is a critical element in the housing construction process and determines its production potential. At present, severe shortages exist in the Soviet Union for virtually all types of basic construction materials such as cement, non-metallic (*nerudnye*) wall materials, various prefabricated construction components (*sbornye konstruksii*), and bricks. The immediate reason for shortages is, of course, the imbalance between state prices and the available financial resources of the construction enterprises.

There are, however, additional factors which exacerbate the situation. First, Soviet workers and managers lack incentives to be careful and frugal during the transportation, storage, and usage of the construction materials. According to some estimates, losses in transportation, storage, and through wastage account for 25-30% of all cement, 15-20% of all glass, and 10% of all bricks consumed in the USSR. Other materials are wasted at similar rates.⁴⁵

Second, the existing system of rewards provides strong incentives for both architects and builders to use the greatest amount of construction materials in designing and executing projects. Design firms, as well as builders, are rewarded according to the degree of plan fulfillment. Plan targets are commonly formulated in terms of ruble costs of the project. In other words, the more expensive the design of an individual project, the greater the share it would represent of the design firm's annual target. The builders' incentives are similar to those of the designers.

Third, the large volume of mothballed designs and shut-down construction projects in the USSR prevents the use of valuable materials in other, possibly more important, projects.

Fourth, there are strong incentives for project management to hoard the most critical, shortage-prone construction materials and equipment for other purposes, such as barter

⁴⁵Sneiderov (1991). Losses due to these factors may be overestimated since enterprises may be tempted to report high losses to cover up internal theft of materials.

transactions. Thus, even if the project has enough cement for its own use, it would try to obtain more from state suppliers in order to exchange it for other building materials in short supply. Meanwhile, inadequate storage facilities at many sites cause a significant amount of building materials to be destroyed through exposure to the elements. Hoarding is often undertaken by a project as protection against future shortages. If management expects a shortage of bricks in the future, it will try to accumulate large inventories of bricks even if the current needs of the project are met. When thousands of managers act in this manner at construction sites across the country, shortages become a self-fulfilling prophecy while storage costs increase tremendously.

Fifth, in addition to a low aggregate price level, incorrect relative prices increase shortages of some construction materials compared to others. For example, the state price of a ton of cement in 1990 was the same as the price of a ton of asphalt or a ton of sand. Naturally, this will have a greater impact on aggravating the shortage of cement in comparison to the shortage of sand.

Besides the factors listed above, the shortages of construction materials are exacerbated by the stagnation of the construction materials industry which has been growing at close to a zero rate over the past ten years (see **Tables 20 and 21**). The main reason for this slow growth is the small volume of capital investments in the industry. This has resulted in excessive obsolescence of fixed assets and a low technological level of production. Even those investment funds that are earmarked for the expansion of the construction materials industry are constantly under-utilized due to the lack of the physical and administrative capacity of the responsible implementing ministry.

The importation of most building materials does not significantly affect their supply situation. While as of 1989 the Soviet Union was a net importer of building materials in value terms (the net imports amounted to about 630 million rubles), more than half of the imports consisted of insulation materials. The country was a net exporter of such important commodities as cement and window glass. The Soviet foreign trade publication for 1989 (*Vneshne-ekonomicheskie svyazi SSSR v 1989 godu*) provided no data on the balance of trade in other key materials, such as bricks. The recent hard currency problem has certainly reduced the role of the building materials imports even further.

A relatively new problem results from the fact that a significant share of the production of equipment for the construction materials industry in the USSR had been allocated to the East Europeans (the former Soviet partners in the Council for Mutual Economic Assistance, CMEA). Since early 1989, the trade links between the former CMEA partners and, especially, between the USSR and the East European countries, have been either weakened or broken completely. The dramatic reductions of Soviet imports from Eastern Europe may seriously damage some parts of the Soviet construction materials industry.

TABLE 20
PRODUCTION OF CONSTRUCTION MATERIALS

	1980	1985	1986	1987	1988	1989
Roofing Slate, million tiles	7,308	8,270	8,577	8,777	8,895	9,003
Construction Brick, billion units	41.8	41.2	42.6	43.4	45.0	46.0
Reinforced concrete components, mln m ³	122	136	142	149	153	151
Of which Stress Reinforced	27.2	29.6	31.2	32.1	33.3	32.3
Wall Materials, bln units of brick equiv.	58.0	59.1	61.6	62.8	65.8	68.1
Of which Construction Brick	41.8	41.2	42.6	43.4	45.1	46.1
Of which Fireburned Brick	27.5	26.6	27.5	27.8	29.0	30.0
Soft Roofing Materials, mln sq.m.	1,723	1,928	2,002	1,983	2,010	1,962
Construction steel components, mln tons	4.6	4.6	4.6	4.6	4.6	4.4
Tile, mln sq.m.	0.6	0.6	0.7	0.9	0.7	0.6
Construction Glass, mln sq.m.	265	268	284	278	277	269
Linoleum, mln sq.m.	90.4	112	115	122	137	141
Ceramic Tile for Floors, mln sq.m. Ceramic	23.2	30.9	30.9	31.2	31.8	30.9
Facing Tile for Walls, mln sq.m.	32.6	41.8	42.8	46.1	48.7	51.6
Acid-proof Ceramics, thousand tons	609	606	607	595	585	569
Ceramic Sanitary Articles, million units	9.6	10.0	10.3	10.8	11.1	11.2

SOURCES: *Narkhoz 1989*, p.400; *SSSR v tsifrah v 1989 godu*, p.221.

Some analysts hold hopes for improvement in the situation through the conversion of military enterprises and the reduction in demands for military construction. The reasoning is that the high technological potential of military enterprises may allow them to produce more sophisticated equipment and entire technological lines for the construction materials industry. This argument suggests that significant resources could also be freed up by freezing construction on military projects. The process of conversion, however, has been extremely slow and adaptation of military enterprises to civilian production, when attempted, has been mostly unsuccessful. Previous attempts to increase civilian production in military industries has largely involved simply adding new facilities to the existing military enterprises, rather than genuine conversion of military lines to civilian output. The experiences so far provide little hope that conversion will make a difference in the construction materials industry over the next 5 years or so.

The current emphasis on private housing construction makes production of bricks and cinder blocks (*iacheisty beton* or *penobeton*) particularly important. Cinder blocks are not yet produced in the USSR on a significant scale due to the lack of the necessary equipment. This situation is not likely to change in the near future. Surprisingly, the production of bricks has been growing only by about 1% per year during 1980-89 despite the increase in demand from private projects (see Table 20). In addition, the production of other materials used in

construction such as glass, gypsum, and wooden boards has either stagnated or dropped in the second half of the 1980's.

TABLE 21 PRODUCTION OF CEMENT BY REPUBLIC (thousand tons)						
	1980	1985	1986	1987	1988	1989
USSR	125,049	130,772	135,119	137,404	139,499	140,436
RSFSR	75,792	79,089	81,133	82,538	84,030	84,518
Ukraine	21,612	22,444	23,069	23,193	23,533	23,416
Byelorussia	2,035	2,119	2,141	2,204	2,266	2,283
Uzbekistan	4,179	5,287	5,425	5,512	5,583	6,194
Kazakhstan	7,099	7,549	8,066	8,349	8,446	8,650
Georgia	1,673	1,576	1,544	1,481	1,351	1,530
Azerbaijan	1,196	1,253	1,279	1,290	1,220	1,059
Lithuania	3,373	3,383	3,388	3,394	3,405	3,410
Moldavia	1,221	1,232	1,955	2,209	2,361	2,258
Latvia	838	787	868	843	825	776
Kirgizia	1,272	1,209	1,272	1,311	1,380	1,408
Tadjikistan	1,052	1,080	1,102	1,094	1,109	1,110
Armenia	1,733	1,665	1,735	1,759	1,680	1,639
Turkmenia	761	1,005	1,024	1,066	1,110	1,057
Estonia	1,213	1,094	1,118	1,161	1,200	1,129

SOURCE: *Narkhoz 1989*, p.399.

The prospects for increased brick production are bleak. Out of 8,000 brickyards in the USSR, the majority has been in operation for over 20 years and two thirds are in need of major repairs and reconstruction (Minibaeva 1991). Newly commissioned plants for brick production are experiencing difficulties due to lack of spare parts.

Lately, the increase in production of bricks has been slowed by the emerging ecological movement which has prevented the development of some local deposits of raw materials, such as sand, clay, asphalt, and gravel.

8 PRIVATE SECTOR PARTICIPATION IN HOUSING PRODUCTION

Since the mid-1980's, Soviet leaders have recognized that the housing problem could not be solved without an active participation of the private sector. The recent dissolution of the central authority in the Soviet Union has led to a precipitous decline of the state sector in the economy. Currently, the very economic survival of the former Soviet republics depends to a large extent on the ability of the private sector to provide a viable alternative to the disintegrating state sector.

While the growth of private enterprise in the USSR has been encouraging, the private sector remains relatively small and continues to be plagued by serious problems which undermine its potential. These problems include:

- the short-term orientation of entrepreneurs due to political instability in the country and the unpredictability of the future legal environment and taxation rules;
- the large discretion of the local authorities in the implementation of the existing legislation and licensing of private sector activities;
- the instability of the financial system, inconvertibility of the ruble, and an accelerating inflation rate;
- the generally underdeveloped nature of capital and financial markets;
- the lack of the essential business skills (e.g. accounting) and business culture in the country;
- the poor state of the country's physical infrastructure.

These problems seriously impede the development of the private sector in housing construction, already a relatively lengthy and capital intensive process. On the other hand, the acute housing shortage in the country and the perception of housing as a hedge against inflation create strong demand for private construction services.

Most of the indigenous private enterprise in the USSR takes the form of cooperatives—private partnerships which initially served as a compromise between the "socialist" and the "capitalist" mode of ownership. By now the superficial distinctions between a cooperative and a purely private enterprise have all but disappeared.

8.1 Construction Cooperatives

While state-owned construction enterprises are reducing their output, construction cooperatives have been growing in number and importance.⁴⁶ At the end of 1990 there were 75,522 active construction cooperatives employing 2.5 million people including part-timers.⁴⁷ The construction cooperatives were the most common and the fastest growing type of cooperatives in the USSR in 1990. Their number in that year almost doubled (in 1988 there were only 1,800 construction cooperatives). Construction cooperatives volume reached 25.96 billion rubles (US \$4.33 billion), leaving all other types of cooperatives far behind. Construction cooperatives sell their output mainly to enterprises and public organizations. This tendency can be explained by the fact that state-owned enterprises are able to help the cooperatives to procure construction materials and transport.

Cooperatives, in general, usually pay much higher salaries than do state-owned enterprises (417 rubles/month vs. 270 rubles/month in 1990).⁴⁸ Construction cooperatives pay their employees at a somewhat higher than average rate of 463 rubles/month (the state construction employees receive only 339 rubles/month). Moreover, these numbers seriously underestimate the differences in wages since many of the cooperative employees are part-timers and their monthly salaries reduce the average significantly.

According to Val'dman and Neshchadin (1990), the average 1989 full-time salary in construction cooperatives was 852 rubles/month and by the end of the third quarter it exceeded 1000 rubles/month. Shchekin and Guliaeva (1990) estimate that full-time wages in cooperatives in 1989 were 4.5 times higher than they were in state contracting organizations. Such differentiation in salaries is due to the cooperatives' ability to charge free market prices and to determine the share of wages to total revenues without government regulations. In construction cooperatives, 85% of all proceeds, net of the costs of other inputs or about 53% of gross revenues, go toward the salaries of members and employees. By comparison, in state construction organizations the share of wages to gross revenues from construction and installation work was less than 40%.

Construction cooperatives, especially those involved in the production of construction materials, often start up operations by taking over poorly performing state-owned enterprises. Cooperatives commonly lease such enterprises with an option to purchase in the

⁴⁶The construction cooperatives should not be confused with the housing cooperatives discussed previously (see section 4.5.2). The former actually do construction work of various kinds themselves, while the latter traditionally contract out most of the work to state construction enterprises.

⁴⁷Most of the information in this paragraph is from Barbashov and Chebatkov (1991).

⁴⁸At the commercial exchange rate of US \$1 to 6 rubles, these numbers would translate to US \$70 and US \$45, respectively.

future. For example, Nev'ianski construction materials plant used to incur annual losses of 400,000 rubles. After cooperative "Stroitel" (Builder) rented it, the plant became profitable, doubling its output of bricks and tiles, and increasing overall quality. In Moscow province, another cooperative "Berezka" (Birch Tree) turned a money-losing state-owned fiber cement plate factory into a highly profitable venture in the first year of cooperative operation. Output was increased by 35% and labor productivity by 60%.

The successes of construction cooperatives are due to the freedom they enjoy in their entrepreneurial activities. Their future depends on preservation of that freedom and on removing several disadvantages they have relative to state-owned enterprises. While cooperatives are able to charge relatively high prices for their output, they often have to purchase their inputs at retail rather than wholesale prices, due to an inadequacy of wholesale trade in the USSR. Construction cooperatives purchase in excess of 20% of their materials on the retail market.

As mentioned above, the cooperatives usually lease poorly managed and unprofitable enterprises from the state. After a cooperative improves operations and operations, however, the lessor, often with the backing of local authorities, sometimes tries to revoke the purchase option in order to regain control of the revitalized enterprise.

Gradually, due to the existence of the cooperative alternative to state enterprises, competition for construction contracts has been emerging in the USSR, especially in rural areas. The attitude of the local councils toward the construction cooperatives, however, has remained ambivalent. On the one hand, better reliability and performance of the cooperatives makes them useful to the local authorities. On the other hand, the incomes of their members generate envy in the population. Authorities are also worried about the drain of skilled labor from state-owned construction enterprises to the cooperatives. In any event, state-owned enterprises still possess the bulk of the construction equipment and have access to the state supply system. Some local authorities tend to harass the cooperatives by holding hearings on their activities and by instituting frequent inspections of their compliance with the cooperative charter. On balance, however, the attitude of the local authorities toward the cooperatives appears to be improving.

In 1989 in order to protect themselves from the arbitrariness of the authorities and to improve coordination of their activities, construction cooperatives organized the Union of Construction and Industrial Cooperatives of the USSR (UCIC USSR). The union is a legal entity whose primary responsibilities include: (1) defense of the rights of its members; (2) help in training the cooperative labor force; (3) exchange and dissemination of technological information; (4) organization of cooperative foreign trade activities and joint ventures; and, (5) development of its own construction materials industry to provide crucial inputs for its members. As noted previously, this last task is particularly important due to the poor performance of the Soviet construction materials industry.

Within the next 2 years the UCIC USSR is planning to build or rebuild about 70 brick making plants with a capacity of 15 to 20 million bricks per year, 20 wood processing factories, and 3 plants for the production of sinks, bathtubs, and other fixtures. The union plans to accomplish this by purchasing complete sets of equipment for these plants in the USSR and abroad. A Belgium firm has proposed to deliver equipment for many of the brick making plants. The UCIC also tries to find lessees or purchasers for unprofitable enterprises in the construction materials industry, of which there are many in the USSR.

The UCIC has created several subsidiaries to implement its primary responsibilities. These subsidiaries include a shareholding corporation "Svoi dom" (Own House) for facilitating and organizing private housing construction in the USSR. This corporation will establish enterprises to produce supplies and components for private housing construction. They hope to help build 300,000-400,000 houses by 1995. Another subsidiary is a firm "Iniurbiuro" which helps to disseminate technological and general information, organize workshops and seminars, and instruct union members in legal and arbitrage cases. The union also organized a foreign trade association "Stroiimpex" for import-export operations and to help its members to conduct negotiations with foreign businesses.

Together with the Institute of World Economy and Foreign Relations and other organizations, the UCIC founded an association of investors and builders called "AMESS" whose purpose is the development of construction projects and programs to be undertaken with foreign participation.

3.2 Leaseholds

Leasing of state enterprises by their work force is considered to be an intermediate form of enterprise re-organization. It combines the features of both state enterprises and cooperatives. The workers are considered to be state employees and all assets continue to belong to the state. At the same time, the leased enterprises do not have to adopt the state wage rates and they possess a significant degree of independence from the state management structure.

The results of leasing, however, are not very impressive. By the end of 1989 only 12% of all state construction enterprises which had the possibility to switch to leasing arrangements actually did so. In addition, leasing programs sometimes have similar features to the "campaigns" of previous regimes when the workers fell under considerable pressure to lease their enterprises. The improvements in performance of the leased enterprises so far have been marginal. The problems of leasing are exacerbated by the lack of clarity in the leasing regulations.

8.3 Commercial Banks

Both Soviet and Russian republic law begrudgingly recognize the commercial banks' right to exist, yet fail to provide a favorable legal environment supportive of the banks' activities. State-owned banks have strong advantages vis-a-vis the commercial banks in this respect. Both the Soviet and the Russian republic Central Banks discriminate against commercial banks, erecting numerous obstacles to their activities. For example, state-owned banks are allowed to loan 25 rubles against one ruble in reserve, while commercial banks are limited to a 15:1 ratio for similar lending.

The central banks have devised complicated and expensive registration procedures which further impede the efficiency of emergent commercial banks. The process of registration for a commercial bank, in principle a straightforward process, normally takes many months and can encounter numerous delays. The Central Bank of the Russian republic appears to be more bureaucratic than the Soviet Central Bank in this respect. In the summer of 1991 the Chairman of the Russian Central Bank went as far as to impose a ceiling of 25% per year on the interest rates that commercial banks are allowed to charge their customers. This is in an environment where, according to many estimates, the inflation rate exceeds 100% per year (some estimates go as high as 600%).⁴⁹

The 25% per year interest ceiling, however, may not necessarily place the commercial banks at a disadvantage since according to the most recent information the state banks are paying 10-11% interest on time deposits. Note, however, that the deposits in the state banks are fully guaranteed by the government while the commercial bank deposits are not protected. In addition, the state banks have a local monopoly position in some regions due to insufficient development of the commercial banking system. A large proportion of household time deposits in the state Savings Bank (Sberbank), however, were not put there voluntarily by the population. Instead, these deposits resulted from compensation paid to current savers at the time of the price increases of April 2, 1991.⁵⁰

Until recently, commercial banks could be searched without a warrant, or even closed by the police or other security forces. The President of the Association of Russian Banks S. Egorov referred to the current situation in the banking industry as the "war of the banks" (*Rossiiskaia gazeta*, October 2, 1991, p. 2).

⁴⁹The peculiar institutional structure of the Soviet economy makes estimating inflation extremely difficult. The Soviet system has a number of markets for identical goods. There are state-run markets, "commercial" outlets, black markets, commodity exchanges, and auctions. The prices in these markets, as well as their dynamics, often differ significantly from each other. In addition, prices of many goods vary widely across regions. All this makes the determination of a single inflation rate problematic.

⁵⁰The funds, which were designed to compensate savers for the decreased value of their accounts, were deposited in the Savings Bank and cannot be withdrawn for several years.

Due in part to this hostile environment, the commercial banking sector in the USSR has not yet sufficiently developed to adequately serve the needs of the investment community. The number of banks established in response to the promulgation of the Law on Cooperatives in 1988 has grown from 77 commercial banks at the end of 1988 with assets of 2 billion rubles, to over 400 by September 1990 with total assets of 32 billion rubles.⁵¹ Today, approximately 1,500 commercial banks are now operating in the country with probable assets in the 80-100 billion ruble range.

According to Egorov, however, the country's commercial banking capacity is "an order of magnitude" less than necessary for servicing private enterprises. In many cities, commercial bank branches simply do not exist, and where they do, the lack of modern communications systems and equipment exacerbates existing inefficiencies.

8.4 Commodity Exchanges

Emerging commodity exchanges constitute a vital element of free market infrastructure in the Soviet private sector. Their importance is enhanced by the breakdown in the state supply system. While the importance of commodity exchanges grows rapidly, no systematic information about them is currently available. The following is a description of the workings of one of the better known institutions, a Moscow commodity exchange "Alisa" which specializes in construction materials.

On any given "exchange day" all participants of the exchange have to pay an entry fee of 1,000 rubles (US \$167). Every participant has to have either a stamp (promise to pay) of the organization he represents or a check book for immediate payment for the negotiated transaction. All potential sellers who wish to take part in an auction have to deposit with the broker 3% of the total value of the sale calculated using the maximum price asked by the seller. This deposit serves as a confirmation of the actual existence of the goods. After the transaction has been completed the seller receives a refund of the deposit within 5 days. The exchange obtains its commission from the buyer. If the contract of sale has been signed but the sale falls through and it was the seller's fault, then the broker pays the buyer 1% of the transaction value. (Presumably the exchange keeps the seller's deposit.)

The main feature of the exchange is that the buyers expect actual delivery of the goods. In this sense "Alisa" operates more like an auction rather than a western-type commodity exchange. The work of "Alisa", handicapped by the inadequate communications system, is not as efficient as it could be. Table 22 provides some prices at which transactions took place in "Alisa" in May 1991.

⁵¹See Chapter IV.5 on Financial Sector Reform in *A Study of the Soviet Economy*, IMF, 1990, for further description of the emerging commercial banking system.

TABLE 22
PRICES ON "ALISA" EXCHANGE IN EARLY MAY 1991 (rubles)

Garden Houses	7,500	per unit
Suspended Ceilings	110	per square meter
Asphalt	300	per ton
Machine for Production of Wall Stones	50,000	per unit
Truck "Kamaz"	170,000	per unit
Steel Net	5	per square meter
Construction Nails	3	per kilo
Framing Steel	2,500	per ton
Sheet Steel	3,000	per ton
Wire Copper	27,600	per ton
Window Linteil	400	per unit
Facing Panels	150	per square meter
Red Brick	520	per one thousand
Facing Tile	40	per square meter
Wall Unit	315-360	per unit
Concrete Panels	740-1,100	per unit
Artificial Marble	190	per square meter
Plastic Cellophane Film	5	per linear meter

SOURCE: *Izvestiia*, 5-14-1991.

8.5 International Joint Ventures

Many joint ventures between foreign, and specifically US-based companies, and Soviet counterparts are coming on line, but their role in local housing construction has been limited. Of those housing projects currently underway, the majority are exclusive international housing developments catering to expatriates working with multinational corporations in the Soviet Union. Generally, leasing a unit in these projects requires payment in convertible foreign currencies. The following sections highlight several foreign-Soviet joint-ventures organized for the production of housing and building materials.

8.5.1 Construction Projects

Senie Kerschner International Housing Limited has perhaps the largest and most well-known project called *Rosinka*, located in the exclusive *Krasnogorsk* ("Beautiful Hills") region of Moscow. The Soviet partner is **Zavet Ilyicha**, a farming collective with 5000 acres of land which stretch over a 10 village area. The plan calls for 478 two-story town house units in a planned community with numerous amenities.

The **J. A. Jones Construction Company** has organized a Moscow joint-venture called **Mosjonstroy**. The Jones organization, with over \$2.5 billion in annual revenues, has linked up with the Soviet Union's largest engineering and construction agency, **Glavmosstroj**, a conglomerate of 38 construction and housing divisions, 14 materials and components factories and numerous design entities. Planned projects include mixed-rise large paneled housing units for the City of Moscow, though nothing has been initiated to date.

The **Perestroika JV** is currently focused on the construction of two residential apartment complexes in central Moscow. The project involves two other US companies, the **World Housing Corporation** of Atlanta, a construction/development management company, and the Savannah-based architects and engineers, **Hussy, Gay, Bell and DeYoung**. PJV's highest-priority complex is a low-rise development of several townhouse-style apartment buildings. Lease prices are estimated between US\$595 and US\$650 per square meter. The second Perestroika JV residential project is the renovation of a seven-story building. The building will comprise 78 units, with amenities including child care facilities, exercise facilities and a lap pool, and social/conference rooms.

Polar-BEK, a Finnish-US group, is the only company with US representation to pre-qualify for the 7.8 billion D-mark housing program for the Soviet troops returning from the former East Germany.

The Soviet-American-Danish JV named **Most (Bridge)** has announced plans to build 120-340 square meter cottages on the outskirts of Moscow. The cottages will be sold in rubles to wealthy or credit worthy Muscovites. Prices range from 200,000 to 400,000 rubles (US \$33,333 to US \$66,666). The JV expects to be allocated 20-25 hectares for the construction of about 100 cottages in the near future. According to the Soviet press, **Most** will invest 300 million rubles in the project within the next five years. **Most** is a joint venture of **Nevatim (US)**, **Group Jespersen (Denmark)**, and **Infex (USSR)**.

Pacific Modern Homes Inc. of Elk Grove, California is completing a three-phase agreement with **Minskremstroj Production Association**, headquartered in Minsk, to provide equipment, training, and technology to produce industrialized housing in the Soviet Union. The new 20,000 square foot factory, located in the village of Rakov, will be used primarily to build housing for the victims of radiation fallout from the Chernobyl nuclear accident. The accident occurred about 200 miles south of Minsk, the capital of the Soviet republic Byelorussia. Five years later, 100,000 people from these areas remain homeless. In the third phase of the agreement, Soviet technicians will be trained at **PMHI's** Elk Grove facility to produce custom housing components using **PMHI's** proprietary software and procedures.

K. Hovnanian Enterprises Inc., a New Jersey-based residential developer, in a charitable effort to aid citizens of Stepanavan, Soviet Armenia—the city devastated by an earthquake in 1988—will build a 40-acre American Armenian village, financed by the American Armeni-

an church. The \$30 million project will comprise retail shops, a clinic, schools, a theater, and 325 two- and three-bedroom stacked flats. Of the first six 16-unit buildings, two are completed and a third is underway. Although the units are designed for three to four people, they will likely be occupied by extended families owing to the scarcity of housing. The cost of the residential section alone may reach US\$6-7 million. The local Armenian government has retained ownership of the land during the construction phase; upon completion, the national government regains control as landlord. Local labor is provided by the Soviet construction organization Gosstroj. After a year of on-the-job training, the local construction crews will finish the job.

The Boston architectural firm **SBA/Steffian Bradley Associates** has created the **Amstroj** joint venture with **Millpond International** and **MGPO**, the Moscow City Council's Department for Housing and Office Buildings. Their first project, **Borodinskaya Center** is a free-standing facility in downtown Moscow that will be developed into a five-story, 5,000-square meter, Class A office building. The \$12 million project is expected to be ready for occupancy by the end of 1992. Other **Amstroj** projects under consideration in Moscow include additional office buildings, urban and suburban residential communities, multi-use properties, and a movie theater/nightclub complex.

8.5.2 Production of Construction Materials

Pioneer Windows of New York, a manufacturer of aluminum window frames, has begun production in the USSR and plans to sell most of its products in rubles. A Finnish-Soviet concern **Nev-Al**, owned by **SV-Import KY** (Finland) and the **Construction Committee of the City of St. Petersburg**, is also manufacturing aluminum window frames in the USSR.

A Spanish company **Tribotechnica** is building a brickworks factory in Sevastopol, the Ukraine, and plans to expand into cement, windows, doors, wooden floors, and parquet products.

8.5.3 Other Joint Ventures

Numerous other joint ventures have been created for a variety of manufacturing, construction and marketing operations. A sampling of recent joint ventures, as noted in *East European Construction*, includes the following:

- **Americam International**, originally linked with Intourist, will be opening the Radisson Slavyanskaya hotel.
- An Irish-Finnish-Soviet joint venture between the Irish subsidiary of **Solman Rakennus-ventti Oy** and the **Mining Authority of Vyborg**, has begun construction of a 200-300 bed hotel in the center of Vyborg, a city near the Finnish border.

- The German Lufthansa-owned hotel chain **Kempinski** is opening the **Baltschug** hotel in Moscow.
- A Swedish-US-USSR joint venture between **Sven Tumba, American International Golf Resorts** and **UPDK** of the USSR Ministry of Foreign Affairs is building the first official 18-hole course in the USSR.
- The Japanese have started construction of a colored steel manufacturing plant south of Moscow for the production of construction, materials, appliances and automobiles.
- The Italian group **Technipetrol** is building a cotton mill and polyethylene plant in Turkmenistan.
- **United Cinema (US)** has plans to build six multi-plex theater complexes in the USSR containing 18 auditoriums.
- A Soviet-German joint venture is constructing a meat processing plant in Lugansk

9 THE INFORMAL SECTOR

Informal economic activities are important in any economy, and particularly in less developed economies. In the overly regulated Soviet economy, where even now the state attempts to control most prices and where until only recently most private economic activities had been prohibited, the informal sector plays a vital role. Without a large informal sector the Soviet economy would have collapsed many years ago. In the past, informal economic activities alleviated mistakes of the central planners, coordinated a significant share of microeconomic activities, and allowed individuals and organizations to circumvent the bureaucratic red tape.

The informal sector, however, often exhibits serious inefficiencies compared to a developed market economy with well-established market institutions. For this reason, the role of the informal sector in the Soviet Union is expected to decline in the long term. In the foreseeable future, though, the contribution of the informal sector to the Soviet economy in general, and to housing in particular, will remain crucial for understanding the workings of the system, and the progress and effects of reforms.

For obvious reasons it is difficult to provide reliable quantitative estimates of current operations of the informal sector. The descriptions in this section will be largely limited to the qualitative institutional aspects and anecdotal evidence of informal sector activities.

9.1 Housing Construction and Repairs

Like in many other countries, the Soviet construction sector has always attracted a significant portion of informal economic activities. For years, thousands of private contractors known as *shabashniki* have been building houses, roads, farm buildings, and other structures. A typical *shabashnik* is a male, 25-40 years old, who takes time off from his state sector job to make extra money. *Shabashniki* usually work in teams of 3-9 people, earning 3-4 times as much as they do in their official jobs. Some also take payment in-kind. Most of the work *shabashniki* perform is under contract with collective and state farms, but sometimes they work for individuals as well. Even though a legal contract may be present between the customer and a representative of the *shabashniki*, the *shabashniki* team itself would not, as a rule, be a legal entity.

Some *shabashniki* have valuable construction skills and work for a period of 6 to 8 months before returning to their state job, while others are students or post-graduates who work during vacations. Housing repairs in large cities are often performed by *shabashniki* who moonlight after hours to supplement their low salaries in state jobs. In fact, income

from such moonlighting is as a rule greater than the official salary. Until recently, however, an official job has been required from all able-bodied adults not classified as dependents.

Presumably the proliferation of construction and repair service cooperatives (see section 7.1) has reduced the relative importance of the *shabashniki*. In fact, one could conjecture that many of these cooperatives were organized by the former *shabashniki* who took advantage of the possibility to engage in their trade with a greater measure of legal protection and on a full-time basis. Nevertheless, *shabashniki* are still in demand for building private country houses (*dachas*) and rectifying poor workmanship in state-built housing. Traditionally, and especially currently, most of the work by *shabashniki* takes place in the countryside.

Interestingly, during the 1980's the media portrayal of a *shabashnik* changed from a greedy parasite and a crook receiving money for shoddy workmanship to a positive response to the inefficiencies and shortages created by central planning mistakes and bureaucracy. During the same period the Soviet government attempted to codify the relationship between *shabashniki* and clients, in part to control the phenomenon and in part to reduce the vulnerability of the legally unprotected *shabashniki* to exploitation and fraud by their employers.

One of the greatest difficulties experienced by *shabashniki* as well as by officially registered construction cooperatives, is procuring construction materials. Often the only channels for obtaining crucial inputs are through begging, bribing, or stealing. The legal commodity exchanges (see section 7.4) are underdeveloped, and are not accessible to many construction outfits, particularly to *shabashniki*. Black markets in construction materials are widespread. Prices in these markets vary across regions and normally exceed the official prices several fold (see Table 23). The data also reveal a rather high rate of inflation in the black market for construction materials, with brick prices rising the fastest. It is difficult to ascertain, however, whether or not black market inflation in construction materials prices exceeds the economy-wide rate.

9.2 Housing Allocation

As previously mentioned in section 4.7.1, the second economy plays an important role in allocation of housing, including state-owned, in the USSR. Even prior to current reforms, Soviet households managed to bypass the strict rules of housing allocation and obtain the amount of housing corresponding at least to some extent to their monetary wealth. The informal mechanisms for achieving this goal included side-payments during exchange of apartments, bribes to housing allocation officials, and renting housing from private individuals where the amount of rent exceeded the legal limit.

TABLE 23
BLACK MARKET PRICES FOR CONSTRUCTION MATERIALS, 1990
(rubles)

	Lum-ber (m ³)	Facing Block (m ³)	Win-dow (unit)	Ply-wood (sq.m.)	Ce-ment (50 kg)	Lino-leum (sq.m.)	Brick (1,000)	Wall-paper (roll)
Average	191	287	131	8.6	10.5	16.6	318	25.3
Ratio to state price	2.4	8.9	2.7	3.2	2.3	2.9	4.1	3.0
December 1990 price as percent of August 1990 price	116.6	268.0	118.7	124.9	124.9	128.3	160.4	117.4
In Cities:								
Moscow	213	303	--	8.7	19.5	13.5	228	18
Ashkhabad	--	--	--	--	--	--	--	15
Baku	300	400	--	--	9.0	--	300	33
Vilnius	350	800	350	10.0	10.0	25.0	700	--
Yerevan	--	--	--	6.0	6.0	10.0	--	50
Dushanbe	--	--	--	--	--	--	--	23
Kiev	--	--	200	--	30.0	--	125	--
Kishinev	--	--	--	--	--	--	--	--
Lvov	--	--	--	--	15.0	--	--	--
Minsk	--	--	--	--	--	--	--	--
Odessa	155	225	155	4.5	11.0	35.0	300	--
Riga	250	500	40	8.0	20.0	30.0	1,500	--
Tbilisi	--	--	--	--	8.0	--	--	40
Frunze	--	--	--	--	--	--	--	--
Kharkov	--	--	--	--	--	--	2,500	--

SOURCE: *Ekonomika i zhizn'*, no. n/a, 1990.

Numerous examples of illegal and semi-legal transactions in the Soviet housing market provided in Morton (1980) and in the Soviet media confirm the existence of well-developed second economy markets. Thus, *Ekonomicheskaja gazeta* (no. 36, 1986, p. 18) reported that "citizens who have extra housing can easily exchange their flats for larger ones. Experience shows that often a genuine buying and selling of housing is hidden behind such unequal exchanges." Side-payments go from the household leaving the smaller (worse) apartment to the household moving into it.

In many markets the per square meter rates for these side-payments are well-established. According to reports in Soviet newspapers in the mid-1980's (cited in Alexeev, 1988), these rates ranged between 100 and 250 rubles (US \$17-4?) in various cities outside of Moscow. Perevedentsev (1990) reports a significantly higher range of 300 - 500 and more rubles testifying to a significant degree of inflation in these markets. Outright bribes to the officials responsible for housing allocation are not uncommon either.⁵²

An important implication of these phenomena is that the actual beneficiaries of housing subsidies may not always be the current residents of a state-owned apartment. When the dwelling is obtained through bribing an official or through a side-payment during the exchange, either part or the entire subsidy is capitalized in the side-payment or bribe. The household making the payment in effect "purchases" the subsidy, while the recipient of the payment is the actual beneficiary of the subsidy. This argument has a bearing on the issues of fairness in the process of privatization of housing, particularly for households who have more than the average amounts of state-owned housing. Indeed, they may have paid for their housing already. From this point of view, the fairness of forcing these households to buy their excess housing from the state during privatization is questionable.

Another mechanism for improving one's housing situation through informal means is renting a dwelling from private individuals. As was indicated in section 3.5.4, Soviet law always allowed renting one's housing unit. Until recently, however, it had been prohibited to extract profit from such an arrangement. Also, the system of *propiska* (see section 3.7.4) has imposed significant restrictions on private rentals. While less than 1% of Soviet families were officially renting their housing from private individuals, the true size of this phenomenon is surely much greater. In addition, even those who are officially registered as renters almost certainly have to pay large premia over the officially listed rental charges.

The pending elimination of the *propiska* system in the republics, privatization of state-owned housing, and the general relaxation of rules for private rentals will have an ambiguous effect on rental rates in real terms. On the one hand, the demand for private rentals will experience a rapid increase which will, in turn, push up rental rates. On the other hand, the supply will rise significantly, while the risk premium charged in illegal transactions for private rental arrangements should disappear. On balance, barring imposition of high taxes on housing rentals, complete legalization of private rental market would probably act toward reducing the rental rates in real terms.

⁵²For references see Alexeev (1988).

10 FRAMEWORK FOR HOUSING REFORM AND TOPICS FOR FURTHER INVESTIGATION

This final chapter contains two principal sections. The first section establishes a broad framework for the mid- to long-term reform of the Soviet housing sector. A final section briefly discusses topics for further investigation.

10.1 Framework for Housing Reform

The joint IMF-World Bank *Study of the Soviet Economy* proposes four principal areas for reform of the Soviet housing sector: (1) property rights and privatization; (2) rents, sale prices and subsidies; (3) housing finance; and, (4) housing production and delivery. The IMF study notes that housing reform is an important component of overall macroeconomic stabilization and structural change. It cannot proceed separately, but must be integrated with reforms in other parts of the economy. The report goes on to state that reform of the housing sector must deal simultaneously with both the existing stock and new production. The following sections briefly summarize the principal elements of a framework for the reform of the Soviet housing sector as set forth in the IMF document.⁵³

10.1.1 Property Rights and Privatization

The goal of privatization should support the rational and efficient use of the existing housing stock. This implies the development of a well-functioning rental market, rather than the hasty transfer of the existing stock to individuals at greatly undervalued prices in order to simply free public authorities from the heavily subsidized costs associated with operation and maintenance.

The IMF report notes that the privatization of the Soviet housing stock will have to consider the following factors:

- major rent increases will have to precede changes in property rights in order to create incentives to buy;
- valuation of existing units and the determination of selling prices will involve difficult technical issues given the uncertainty with respect to housing prices following rent increases;

⁵³The following section draws heavily on Volume 3, Chapter V.9 (Housing), pp. 330-335 of the *Study of the Soviet Economy*, IMF et al., February 1991.

- eligibility of prospective buyers, particularly whether individuals other than the current occupants can purchase units;
- financing the purchase, given the existing high price-income ratio facing current tenants.

The clarification of property rights will take time. As mentioned above, the issue of rent increases will have to be addressed before major changes in property rights can advance very far. Over time, the housing sector must clarify three types of property rights: (1) land use rights; (2) ownership of buildings and individual housing units; and, (3) ownership of infrastructure and other public assets by local governments and state enterprises. A necessary first step is to remove the myriad laws and regulations that are systematically biased against the free and effective use of private housing property.

10.1.2 Rents, Prices and Subsidies

Rent reforms and utility pricing reforms are necessary for the successful reorganization of the housing sector. The two central principals of rent reform should be to ensure that rent will not only cover operation and maintenance of a unit, but the full economic cost of housing, as well as provide social subsidies directly to families and individuals in need, rather than through the allocation of a specific subsidized unit. In addition, utility prices should be shifted to full-cost pricing, while individual metering should be the norm and peak load pricing introduced. Current subsidies and allowances for new production should be rechanneled away from the state construction industry and, in stead, targeted directly to needy households and other social groups.

10.1.3 Housing Finance

As noted in previous sections, the USSR, even before the breakup of the union government, did not have a developed housing finance system. Given the decline in importance of the union government, it is now probable that housing finance systems will have to be developed at the republic level as part of overall financial sector reform. The IMF study proposes the following elements of such systems: (1) financially viable long-term loan instruments; (2) separation of subsidy elements from financial credit, with a transparent funding of subsidies; (3) introduction of effective forms of loan guarantees and foreclosure laws; (4) creation of new lending institutions; and, (5) consideration given to local market conditions when selecting the financial service to be provided and the specific housing activities to be financed (i.e., financing package to include middle-income, as well as low-income, housing, home improvement loans, and loans for the privatization of existing units.

10.1.4 Housing Production

Competition among housing producers should be encouraged in conjunction with the elimination of preferential treatment for large state construction enterprises. Reform of the urban planning system and improved local government management will be critical ingredients to improved housing production.

10.1.4.1 Diversification of the Housing Industry

The IMF study lists the main factors needed to stimulate the development of a diversified and competitive building industry as follows: (1) enforcement of open competition among housing developers and the emergence of private developers; (2) the dismantling of the monopoly supply of building and construction materials; (3) phasing out of preferential access to finance and building materials given to large state construction enterprises; (4) comprehensive review of the rules and regulations affecting the design and construction of housing; (5) total revision of the urban planning system that was designed to fit the need of large-scale industrial housing production; and, (6) reorganization of large industrial housing enterprises currently using large concrete panel construction to ones capable of employing multi-purpose building components, and coordination and management of the construction cycle through contractual, rather than centralized bureaucratic means.

10.1.4.2 Reform of the Urban Planning System

To remedy the problems associated with the costly and time-consuming Soviet urban planning system, the IMF study proposes the following actions: (1) systematic review of the large number of urban laws and regulations with a view to eliminating unnecessary or repetitive approval steps; (2) reconsider the role of the Soviet master planning process; (3) accelerate the trend toward decentralization of the administration of the development process to the level of local government, particularly with respect to private development projects; (4) make optimum use of existing urban land, particularly infill sites, to encourage more efficient patterns of urban investment and the emergence of small- and medium-sized private builders and developers; and, (5) adjust system of infrastructure provision and pricing to incorporate secondary and tertiary networks into specific project development and to decentralize administration to the local level.

10.1.4.3 Strengthen Role of Local Government

The role of local government as facilitator of housing production should be strengthened with respect to three principal elements: (1) regulation of land transfer, land use and the urban planning system; (2) the provision and financing of infrastructure in conjunction with other levels of government; (3) management of local public assets including the sale, transfer and/or continuing management of land and public buildings.

10.2 Topics for Further Investigation

Given the rapidly evolving nature of the composition of the Soviet Union itself, it is assumed that some of the observations and findings in this study will be superseded by events. Several clear streams of reform have been noted, however, that relate directly to the housing sector. Yet, since the implementation and mechanics of these reforms are, in many republics, still under debate, it has been impossible to gain a full understanding of these efforts. It would be extremely useful to pursue the following topics for further investigation:

- 1) **Housing Finance** - The precise structure of current financing for housing construction is unclear. While funds are now under the control of the republic governments rather than the central government in Moscow, the extent of this new authority or the mechanisms for finance are still unclear. Previously, a city would submit a project request to the provincial or republic government, that would then be incorporated into a plan one or two years later. It is unclear whether plans are still utilized, and at what level, or if a "pay-as-you-go" strategy is in effect. Additionally, it is not known what new tools for municipal finance, such as bond flotation and other types of taxation, are under consideration. Finally, it is presumed that funds from privatization are playing a major role, but it is not known to what degree.
- 2) **Commercial banks** - Little information is available on the profusion of new commercial and cooperative banks under cooperative and joint stock forms of ownership following the promulgation of the Law on Cooperatives in 1988, or the possible role they might play as new lenders of flexible, unsubsidized mortgages. While most commercial and cooperative banks have been formed by a particular industry or collection of enterprises to serve their respective credit needs, it is not clear whether they have the capacity or authority to diversify their lending. In any case, it is imperative that financial instruments and institutions be developed for the housing sector as overall reforms are undertaken in the financial sector.
- 3) **Privatization** - Details of the activities of privatization of the housing stock are readily available for Moscow, yet given that all cities have the power to substantially modify the law for themselves, it is important to ascertain what is happening outside of the capital. Resistance and conflicts with local municipal officials have been encountered in some municipalities, while others have provided support for the privatization process. As various municipalities formalize and customize the privatization process for themselves, it will be important to document their levels of success.

ANNEX A

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