TURKEY
CUSHIONING ADJUSTMENT COSTS: THE USE OF DEBT OR SUBSIDIES FOR HOUSING

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TURKEY

CUSHIONING ADJUSTMENT COSTS: THE USE OF DEBT OR SUBSIDIES FOR HOUSING

Executive Summary

A. Context

(i) In March 1984 the Government of Turkey (GOT) established the Mass Housing Fund (MHF) to provide counter-cyclical support to a housing sector in which production had stalled. More than 200,000 housing units stood unfinished as a result of increases in interest rates and reductions in income. By mobilizing resources through taxes, and on-lending the funds through the banking system at low fixed interest rates, the MHF effectively stimulated housing production. It also relied largely on existing institutions, rather than the public sector, to carry out the functions necessary to provide the construction stimulus.

(ii) However, over the last three years, 1986-88, GOT expenditures through Extra Budgetary Funds such as the MHF, have increased sharply. The expenditures of the MHF alone have accounted for a significant share of this increase--on the order of one-third of the amount by which government expenditures have exceeded the growth in economic activity. The rate of growth in government expenditures has raised concerns about economic instability. Control and targeting of the MHF expenditures could play an important role in restoring macroeconomic balances.

(iii) Besides a concern with the MHF's role in economic aggregates, it is equally important to recognize its role in the housing sector. Since it began operations, the MHF has essentially become the only source of formal finance for housing in the country. The GOT recognizes that on a long-term basis funding for housing should not be provided through resources mobilized by a tax fund. It recognizes that the MHF needs to reorganize itself to become a more effective body if it is to continue its support for the housing sector in a more efficient way. Accordingly, the GOT asked for World Bank-USAID assistance in carrying out a study of how the MHF financing could be restructured to better serve the sector and the economy.

(iv) This paper is a first draft of that study. It is intended for discussions with appropriate GOT officials and the MHF. It is intended to be a study of how the MHF can most efficiently serve the housing sector. However, because the MHF was established as part of the GOT's broader macroeconomic stabilization policy, this study places particular attention on analyzing how the MHF could be changed from an anti-recession program into one that provides on-going, largely self-sustaining support to the housing sector.

(v) The study is not intended to be a narrow management analysis of the MHF's operations. While such a management-oriented study will ultimately be an important aspect of improving the MHF's operations, it is clear that an

understanding of how the current MHF approach to the sector and the economy compares with alternative approaches is an essential first step in identifying appropriate management objectives for the Fund. In short, before delineating the tactics of how the MHF is to operate a broader strategy of what it should attempt to achieve should first be identified.

B. Basic Findings

The MHF Has Been an Effective Anti-Recession Program

(vi) The MHF has been an effective anti-recession instrument that complemented both the government of Turkey's move to market interest rate financial returns and its wage policy. Both of these policies will in the long-run be very helpful to the economy's adjustment, but in the short-run both also contribute to a cut back in housing production. The provision of MHF financing helped insulate the housing sector from these cutbacks, generated employment by enabling stalled construction to be finished, and helped cushion the real wage reductions that have been part of Turkey's export-led growth. However, the provision of heavily subsidized credit encouraged so much housing investment that residential capital now accounts for 45 percent of private fixed capital formation. A central issue now is how to refocus this program so that it does not just "speed up" housing purchase decisions, but rather provides the kinds of financial services necessary so that housing production does not oscillate so widely.

Restructuring the MHF can significantly benefit the economy and the housing sector

(vii) As the MHF has evolved, it has extended the range of services it provides to the point where it now serves as a developer as well as a funds mobilizer. Careful focusing of its operations on those activities in which the government has a comparative advantage can be expected to be highly complementary to private sector development in the sector. On the other hand, the lack of such careful focusing can be expected to severely constraint private sector development: the private sector cannot and will not compete with a tax fund.

(viii) The MHF has a comparative advantage over the private sector in two activities: (i) as an innovator in the types of financial instruments offered; and (ii) as a bearer or insurer of the macroeconomic risks that affect the repayment of these loans. Moreover, its comparative advantage in these two activities appears to be so strong that unless the MHF provides these services, it is highly unlikely that a private sector housing finance system will emerge for anyone except the very wealthy. Hence, the MHF can play a key role in the development of housing finance in Turkey. In a rapidly urbanizing, industrializing country such as Turkey, this kind of system is an important part of the institutional infrastructure. It can benefit financial resource mobilization as well as the housing sector.

Short-Run Problems Posed By the MHF's Being Too Successful.

(ix) Unfinished Housing Production. Before consideration can be given to refocusing the way that the MHF operates, an important transition issue

needs to be dealt with: how can the MHF cut back its subsidies without creating either problems in the housing construction industry and/or strong disappointment among homebuyers with the MHF. There are probably more unfinished housing units now that do not have MHF funding than there were when the program began. It is a difficult situation, and it is probably impossible not to create some dissatisfaction with the MHF. In a sense, the program's strength has been a source of weakness: it created expectations that probably cannot be fulfilled on an on-going basis. The per loan subsidy rate--on the order of 80-90 percent per loan--is too large to be sustainable.

(x) Recognizing the Subsidy Level in the Current Program. It is always difficult to measure the scale of a credit subsidy, particularly in an economy in which financial transactions take place in nominal terms, and the corresponding nominal interest rates are high in a cash-flow sense, even though the rates changed by the MHF are low in an economic sense. While all MHF beneficiaries realize that the program has been very helpful, they have, nevertheless, still had to make significant sacrifices in order to buy houses. Consequently, it is not likely that many of them would agree that the subsidy level is as high as economic measures suggest it is. If the method of calculating loan repayments is changed in a significant way to reduce the subsidy level, it will probably require a significant effort to explain the necessity of doing so.

(xi) Macro constraints. At present, macroeconomic aggregates make the use of the type of financing provided by the MHF much less desirable than when the program was initiated. The macro environment is now very different from 1984 when the Fund was created, and this difference requires changes in the MHF's method of operation. In particular, at present too large a share of the MHF expenditures substitute for indebtedness households would be willing to take on if a mortgage contract existed that permitted them to do so. However, even if the macro environment was not different from the time of the Fund's establishment, the MHF's subsidy distribution method should be changed. Rather than being a cyclical program that stimulates and accelerates housing investment, it should provide subsidies to those who need them most--i.e., those who are most sensitive to the conditions that make housing investments so volatile.

The Types of Reforms necessary

(xii) Three changes in MHF lending conditions are necessary. First, the repayments of the long-term mortgages should be linked to wages as was possible under some of the early loans. In addition, to assure that a greater share of the real value of the mortgage debt is repaid, the outstanding loan balance should be indexed to prices. Second, the size of the houses eligible for MHF loans should be reduced, particularly if the commercial banks are given regulatory authority to issue new adjustable rate loans which will undoubtedly be used to finance more expensive housing. Third, the costs of construction period subsidies need to be reduced, and if possible, eliminated. There are a number of different ways of addressing this last problem.

(xiii) A New Mortgage Repayment System. The most basic change necessary in the MHF policy is with respect to mortgage repayments. Lending terms should be adjusted so that the real value of mortgage repayments is maintained. Without this kind of change, it is impossible for the MHF to provide subsidies effectively. Alternative ways of doing this are described in the text. This kind of change in repayments could also contribute significantly to reducing the MHF's need for tax revenues. The use of constant value mortgages would allow household indebtedness to replace government expenditures and thereby yield broader macroeconomic gains. In the long-run, it could also contribute significantly to the development of the financial system, providing safe, attractive financial instruments that could induce greater participation in the formal financial sector.

(xiv) The principle of the proposed scheme is as follows: borrowers present evidence of their current annual income and are allowed to borrow an amount whereby payments based on a 15-year repayment period and a real interest rate of say 6-8 percent represent 20 or 25 percent of their income. They continue to pay this share of their income for the life of the loan. If an index of real wages falls, mortgage payments are reduced accordingly. If the real wage index increases, so will payments too. Payment increases cause the loan to be paid off more rapidly, and payment decreases cause it to be paid off more slowly. However, the term cannot exceed 20 years. If a portion of the loan is unpaid at that time, it is forgiven. The MHF in this case is insuring the real value of the repayments against reductions in aggregate real wages. If macroeconomic conditions are such that households cannot repay, the government does. An approach like this has recently been introduced in Mexico, and is in the design stage in Ecuador and Chile.

(xv) A simulation model was developed to evaluate how this kind of instrument would affect government transfers. Analysis indicates that with a 30-35 percent rate of inflation, a repeat of the Turkish real wage experience of the past 15 years may produce a need for some debt forgiveness, but much less than the current implicit subsidy of the MHF. In other words, under pessimistic assumptions about the future behavior of wages, the subsidy is a fraction of the current level. This is a fairly turbulent past, so on that score the assumptions probably overstate how bad things can get. On the other hand, if inflation remains in the present range, of about 70 percent, greater forgiveness occurs. Again, however, this level of debt forgiveness implies a smaller per-loan subsidy than the current system.

(xvi) House-Size Limits on MHF Loans. The heavily subsidized credit provided by the MHF extends to large housing units, up to 150 square meters. The objective should be not to provide subsidies for such large units, but rather to provide subsidies for borrowers if, and only if, they need it. A number of commercial banks are requesting the appropriate permissions to issue a new type of mortgage loan that will enable purchasers of larger, more expensive housing to get financing. If these requests are approved, the MHF should focus its efforts on providing financing for smaller houses, less than 80-90 square meters.

(xvii) Mortgage indexation of some form is such an essential first step in being able to provide housing subsidies to the poor. This is so because, at present, the MHF is essentially the only supplier of mortgage credit in the economy. If subsidies are to be distributed to the poor, it is essential that those who are in principle able to pay for credit--middle income families--have mortgage instruments that enable them to do so. Without indexation, these potential borrowers are unable to afford market-rate repayments. With indexation, they can. Hence, if the absence of indexation prevents middle income borrowers from being able to borrow, it becomes politically very difficult to target assistance on those with real need.

(xviii) Construction Period Subsidies Reduced. Under the current program it takes a long time to complete housing units (33 months). This occurs for a number of reasons, but one of the most important causes of delay is the relatively small share of the cost of the house financed by the MHF loan. It takes some time for families to raise the rest of the purchase price. This results in a long period of construction which in turn increases the size of the per unit subsidy (because the interest during the construction is capitalized at a relatively low fixed interest rate for the entire period). For example, if the interest owed were capitalized at the inflation rate of the past three years plus an 8 percent real rate, rather than the rates used now, the household debt at the time the mortgage payments are begun would be about 20-30 percent larger than it is. Under the current program, this debt is implicitly forgiven.

(xix) Comparing the construction period subsidy of 20-30 percent with the subsidy provided by the long-term mortgage (i.e., the subsidy on borrowing for 15 years at a 15-20 percent nominal interest rate) indicates that: (i) the construction period subsidy accounts for about one-third of the total subsidy given to each unit; and (ii) together the two subsidies amount to 80-90 percent of the loan amount. At higher rates of inflation, this subsidy rate increases further. In contrast, if mortgage repayments were indexed, not only would the subsididy rate be insensitive to the inflation rate, but in addition, the loan-to-value (LTV) ratios could be increased substantially. Higher LTVs, in turn, should be able to reduce the need for such long construction periods, and correspondingly, the need for a construction period subsidy a good deal. As a long-term proposition, construction period subsidies are an ineffective use of the MHF's resources. However, they cannot be addressed directly. The long construction periods stem from the small loan sizes, and the small loan sizes are the result of the lack of indexed credit being available.

C. Recommendations and Action Plan

(xx) The MHF should clarify its role. The MHF should function mainly as a financial intermediary. In this capacity there is a short-term role for it to be an innovator in the types of mortgages available. There is also a role for it to be a provider of a form of subsidized "insurance" that complements government interest rate and wage policy. Families will not be able to repay their mortgages promptly if macroeconomic conditions deteriorate, and lenders will not provide credit if there is a threat that repayments will not be made. The cost to the GOT of assuming this contingent liability can be a small fraction of the costs of the subsidies

now provided through the MHF. Indeed, if the economy stabilizes, costs will not be realized. This clarification of its role and mandate would allow the MHF to move its relatively small staff resources away from related but ancillary lines of business, such as housing development, that in the long-run are likely to be very risky activities. It would allow MHF to further complement the role of the private sector rather than compete with it in ways that discourage private sector development.

(xxi) Perhaps the most contentious aspect of a proposal to maintain the real value of mortgage repayments to the MHF is the question of whether this approach simply attempts to make inflation more palatable, or whether it is one of the key components of a liberalized financial system that attempts to rely on interest rates as the chief means of allocating resources. In the current Turkish financial, fiscal, and urbanization context, the welfare costs to the economy of the prohibition of such instruments are large. We estimate that these costs may be as much as 6 percent of GDP. The issuance of constant value mortgages (initially by the MHF and ultimately by the financial system) is an important component of the broader financial liberalization strategy that the GOT is now pursuing.

(xxii) As a financial intermediary, rather than a housing subsidy program, the MHF should initially focus its financing on moderate-income families and not attempt to reach low-income families. Without the development of a financial system that permits those who can afford to and are willing to pay for housing to do so, it is very difficult, if not impossible to develop effective housing subsidy programs. Except for the MHF there is no mortgage credit available in Turkey. Hence, the first priority is to establish such a functioning housing finance system. Over the longer-term, considerable attention should be paid to developing a housing subsidy system that complements the housing finance system. However, this is not a process that can be quickly implemented, and since the provision of finance is a prerequisite for efficient subsidies, the MHF should first move in this direction. Indeed, even this latter step--the integrating of the MHF into the liberalizing financial system--will take time. World Bank projects with similar objectives in Morocco and Chile have been in progress for more than five years, and are not yet completed.

(xxiii) The mortgage instrument used by MHF should maintain the value of repayments while recognizing the considerable volatility of real wages in the Turkish economy. It should also be a computationally simple instrument that is easy to understand and underwrite. A number of ways of doing this are proposed in the text.

(xxiv) Besides the change in mortgage instrument, the MHF should also change a number of its regulations and changes should be sought in other sectoral regulations. For the MHF, this means: reduce the size of units eligible for financing to no more than 80-90 square meters, increase the loan to value, increase the saving period for loan eligibility, and eliminate construction period subsidies. Loans for larger and more expensive units should be accommodated by strictly private sector financial institutions. Changes in other sectoral regulations are necessary to allow the private sector to provide this credit. In particular: requests by

banks to supply new types of mortgage instruments that allow the value of payments to be changed because of financial conditions should be supported.

(xxv) Action Plan. Consensus should be sought from the Central Bank, the Treasury, and if appropriate, the Capital Markets Board on five issues: (i) that constant value mortgages are an innovation that would help both the housing sector and the economy; (ii) that the MHF should provide the initial funding for such instruments; (iii) a portion of the MHF funds should be earmarked to insure that the government explicitly assumes the risk that the value of the loans will not be affected by changes in real wages; (iv) commercial banks should be given the approvals to issue the new types of mortgages they are requesting; and (v) MHF expenditures for purposes other than for indexed mortgages, e.g. infrastructure expenditures, should either be devolved to other authorities or to other budgetary categories. The MHF mandate should be clearly and narrowly focused, and its success in carrying out this mandate can best be monitored if its financially profitable "lines of business" are segregated from those that are not. Infrastructure investment may well have a higher economic rate of return than housing investment. However, its financial rate of return (i.e., the ability of the lender or investor to appropriate the return to the asset financed) is almost certainly lower.

(xxvi) A first step in this consensus seeking may be the soliciting of comments on this study and its recommendations from appropriate representatives of the GOT. The study presents an overall strategy for the sector and its integration into the financial system. The range of tactics used to pursue this kind of strategy is very wide, and it is only by discussion that the most effective tactics can be identified.

CHAPTER I

INTROUDUCTION

A. Background

1.01 In March 1984 the Government of Turkey (GOT) established the Mass Housing Fund (MHF) to provide counter-cyclical support to a housing sector in which production had stalled. More than 200,000 housing units stood unfinished as a result of increases in interest rates and reductions in wages. By mobilizing resources through taxes and on-lending the funds through the banking system at low fixed interest rates, the MHF effectively stimulated housing production.

1.02 However, over the last three years, 1986-88, GOT expenditures through Extra Budgetary Funds such as the MHF, have increased sharply. The expenditures of the MHF alone have accounted for a significant share of this increase--on the order of one-third of the amount by which government expenditures have exceeded the growth in economic activity. The rate of growth in government expenditures has raised concerns about economic instability. Control and targeting of the MHF expenditures could play an important role in restoring macroeconomic balances.

1.03 Besides a concern with the MHF's role in economic aggregates, it is equally important to recognize its role in the housing sector. Since it began operations, the MHF has essentially become the only source of formal finance for housing in the country. The GOT recognizes that on a long-term basis, funding for housing should not be provided almost exclusively through resources mobilized by a tax fund. It recognizes that the MHF needs to

reorganize itself to become a more effective body if it is to continue its support for the housing sector in a more efficient way. Accordingly, the GOT asked for World Bank-USAID assistance in carrying out a study of how MHF financing could be restructured to better serve the sector and the economy. (See Appendix I for the terms of reference of the study.)

1.04 This paper is a first draft of that study. It is intended for discussions with appropriate GOT officials and the MHF. It is intended to show how the MHF can most efficiently serve the housing sector over the long run. Because the MHF was established as part of the GOT's short-run macroeconomic stabilization policy it is important not to lose sight of the MHF's linkages to other government policies. The recommendations, therefore, attempt to reconcile the long-run objectives of a housing finance system with the short-run concerns that motivated the creation of the MHF.

1.05 The study is not intended to be a narrow management analysis of the MHF's operations. While such a management-oriented study will ultimately be an important aspect of improving the MHF's operations, it is clear that an understanding of how the current MHF approach to the sector and the economy compares with alternative approaches is an essential first step in identifying appropriate management objectives for the fund.

B. Objectives of the Study

1.06 In the broadest terms, the study will contribute to helping the GOT to continue to develop the kinds of institutions necessary for the functioning of a developed market-oriented economy. Having acquired a

relatively diverse industrial base, in the early 1980s Turkey began to develop the kinds of institutions and infrastructure that are essential to self-sustaining, equitable economic growth. In an economy such as Turkey's, which in recent years has experienced one of the most rapid rates of growth in urban population in the world, an important component of this institutional infrastructure is a well-functioning housing finance system. (See Appendix II for a discussion of the types of housing that resulted from this rapid pace of urbanization; the informal gecekondu settlements.)

1.07 In addition to helping to accommodate the very large shift in population associated with high rates of urbanization, the housing finance system must also "fit" into the liberalizing financial system and contribute to domestic resource mobilization. The approach taken also needs to be one that can complement the significant investments in urban infrastructure that have already been made. Finally, and most importantly, the housing finance system should also help target government resources on those that have the most need, and provide financial resources to those who can pay for them.

1.08 More specifically, the objective of this study is to help focus the operations of the MHF so that the public sector provides those services for which it is best suited, so that the private sector will be encouraged to provide the services demanded of it. This can be accomplished by implementing mortgage repayment plans that can help provide a resilient, non-coersive resource base for the financing of future loans, and thereby reduce the substantial inefficiencies in the production of housing. (See Appendix III for a discussion of the composition of the construction industry in Turkey). The mortgage instrument should be designed so that

household indebtedness replaces credit market subsidies, and with repayments that do not pose an excessive burden for families in an economy in which the real wages of many moderate-income households have fallen quite sharply. It must also be a very simple instrument that, on the one hand, does not require large subsidies or complicated income underwriting standards, but on the other hand, is one which assures that credit is accessible to moderate-income families.

C. The Approach of the Study

1.09 This study relies on recent World Bank and USAID projects and studies in a number of countries to provide some examples of how the provision of MHF financing might be restructured to accomplish these objectives. The approach taken is to show that the MHF played an important role in enabling the GOT to pursue market-oriented macroeconomic policies. The government's ability to liberalize interest rates and reduce real wages was at least in part achievable because MHF expenditures substituted for the kinds of financial services that would have been provided to households by a more resilient housing finance system.

1.10 The MHF mobilized resources to enable families to afford housing in an environment characterized by almost no formal finance, high and volatile nominal interest rates, appreciating real house prices, extremely rapid urbanization, and for many real wage reductions. Essentially, it provided a wealth transfer to households who were otherwise confronting sometimes very difficult economic circumstances. However, while this transfer helped enable and sustain broader macroeconomic policies, it was and is an

expensive approach. Over the longer term, the resources mobilized by the Fund should be used to develop a resilient housing finance system that would obviate the need for such transfers.

1.11 Chapter 2 identifies identifies some of the important macroeconomic linkages of housing investment in Turkey. These linkages suggest why a broad perspective is needed to appreciate the operation of the MHF as a policy that helped sustain macroeconomic adjustment policies. Then, in Chapters 3 and 4 the short-run linkages between the sector and the economy are placed in a longer-term perspective that contrasts housing finance policies and housing market conditions in Turkey and a number of other countries. Two types of comparators are used: (i) open economies with similar per capita income levels--Egypt, Malaysia, Morocco, and Tunisia; and (ii) higher inflation economies--Chile, Colombia, Ecuador, and Mexico--that also have a similar level of per capita income. Perhaps the most striking comparator data are :

- o The marked improvements in Turkish economic and housing market conditions over time and compared to other countries. While problems remain, the improvements in both the sector and the economy are significant.

- o The volatility of housing production in Turkey. According to a standardized measure of variability, prior to the creation of the MHF investment in housing as a share of GDP was more than twice as variable in Turkey as it was in comparator countries.

- o The large average size of the housing units financed. MHF-financed units are more than twice as large as the units financed by housing subsidy programs in comparator countries, and they are significantly larger than the subsidized units provided in much more developed economies.

1.12 The first characteristic is not by any means intended to suggest that the shortage of housing identified by the State Planning Organization (SPO) has been eliminated. Rather, it is to suggest that housing problems are most effectively addressed by policies that encourage higher economic growth. In the short run, the MHF has undoubtedly contributed to sustaining a higher growth rate. However, if it is to sustain this growth over the longer term, the MHF needs to be reconstructured.

1.13 The last characteristic should not be taken as evidence that the program's subsidies have been unfairly targeted on those who do not need them. Rather, it should be seen as evidence that the subsidies have substituted for the issuance of debt that households would be willing to repay if there was a financial instrument available. Similarly, the penultimate characteristic could also be the result of the relative thinness of the Turkish financial system, and particularly its housing finance system. (See Appendix IV for a description of the existing housing finance system.)

1.14 Chapter V presents an analysis of how the MHF could be restructured so that it helps to develop a more resilient housing finance system. It

shows how mortgage repayments and MHF subsidies would behave with a different type of mortgage instrument, one that attempted to maintain the real value of repayments under different kinds of economic circumstances. A simple financial planning model is used to simulate the effects of the interaction of various policies with different kinds of economic circumstances.

1.15 The simulations show that, even if the behavior of wages in the near-term is as turbulent as the most volatile index has been in recent years, it is possible to reduce substantially, if not completely eliminate, the credit subsidies now provided by the MHF. If housing standards are reduced, and middle-income households are the targeted beneficiaries of the credit, the introduction of a simple loan instrument (like those that have already been implemented in Mexico and are under consideration in Ecuador and Chile) could change the MHF into the kind of financial intermediary implied by its name, i.e., a fund. (See Appendix VI for the details of the current MHF program structure and Appendix VII for a discussion of the simulation model.)

1.16 Under the proposed approach, the MHF would become a fund that provides a form of protection or, in effect, insurance of the value of mortgages against the inability to repay because of the behavior of real wages. It would insure lenders that real returns on lending would not be affected by household cash-flow problems. Rather than providing the broad range of services to encourage housing production that it does now, the MHF would concentrate on providing the service in which it has a particularly strong comparative advantage--insuring that macroeconomic circumstances (or

the risk that such circumstances may occur) do not make mortgage lending an unprofitable business. Hence, the proposal calls for the MHF to extend and sharpen its current reliance on the private sector.

1.17 This reliance on the private sector can be most effectively encouraged if the MHF specializes in the line of business that the private sector cannot at present supply. Ultimately, the objective would be for the MHF to provide only this form of insurance, with the banking system providing the mortgage credit. (See Appendix VIII for a discussion of possible deposit instruments.) However, over the near-term, i.e., the next four or five years, the MHF would also provide the resources to the banks to onlend as it does now. But, even though the MHF would in the near-term still provide banks with funds, its role would be fundamentally different from its present one. The difference would be that it would be providing seed funds for a mortgage instrument that would ultimately be a self-sustaining source of funds. The new mortgage instrument would help the government to efficiently assume the kinds of macroeconomic risks that households and lenders are unable and unwilling to bear. It would also provide a positive financial rate of return that would encourage financial saving.

1.18 A final Chapter presents a series of recommendations on how the MHF could be restructured to have the maximum beneficial effect on the sector and the economy. After the recommendations are presented, an action plan for implementing these kinds of changes is briefly discussed.

CHAPTER II

THE HOUSING SECTOR:

THE NEED FOR A BROADER PERSPECTIVE

2.01 Housing plays a fundamentally important role in the Turkish economy. It is one of the first things in which Turkish "guest workers" invest their foreign earnings; it plays an important role in Turkish politics, and government assistance to the sector is placing significant pressure on government expenditures. Housing's importance is far out of proportion to the scale of resources it commands. The importance attached to the sector also occurs because Turkey is one of the world's most rapidly urbanizing economies. As a result, the sector is squarely at the intersection of investment policy, social policy, and even wage policy. Arguments as to "how well" Turkey is doing in the sector require a good deal of sifting of opinions and data. When taken in isolation or for a particular year, data on the sector present a number of paradoxes. These apparent paradoxes are resolved when data are analyzed in a broader context that emphasizes the sector's important short-run linkages to the macroeconomy.

The Housing Deficit Paradox

2.02 For example, on the one hand, according to the State Planning Organization (SPO), over the 1973-83 period housing production fell short of housing "needs" by 1.3 million units and over the 1984-87 period "unsatisfied housing needs" increased by anotner half million units. On the other hand, in 1987 the unsatisfied needs continued to increase, even though the Central Bank reported that housing investments accounted for 45 percent

of private fixed capital investment. Just to match the new demand for housing estimated by the SPO would have required on the order of 60 percent of private fixed capital formation, an unsustainable level of investment in housing if the economy is to continue to grow and diversify. Fulfilling all the annual needs identified by the SPO would in fact generate more housing needs because it would result in lower overall economic growth.[1/] Hence, if improvements in housing conditions are to be sustainable, it is important to place measures of housing needs in a broader macroeconomic context. Unrealistic measures of need can be more harmful than helpful.

The Supply or Demand Paradox

2.5 A recent survey of Turkish households by TUSAID[2/] indicates that housing is seen as by far the most important single "need" of households. It is the good on which households would spend much more if they received a windfall. Housing was cited almost twice as commonly as a priority by all income groups in the sample. Hence, it appears that housing demands are unsatisfied. Similarly, the observation that every major Turkish city is surrounded by gecekondu settlements of squatter dwellings would suggest that supply of housing is being rapidly outstripped by demand. Like the SPO estimates, this kind of perspective suggests that government expenditures on housing are a necessary expense just to keep from falling behind on basic urban service provision.

1/ For discussion of the MHF and the Level of Housing Investment in Turkey in Sweder van Wynberger, "External Debt, Inflation and The Public Sector: Towards Fiscal Policy for Sustainable Growth," World Bank Working Paper, 1988, p. 49.

2/ TUSIAD is the Turkish Industrialist and Businessmen's Association.

2.04 However, a comparison of housing conditions in Turkey with those of neighboring countries of similar income shows that Turkish conditions are not only better, they also have been improving much more rapidly even before the creation of the MHF. Hence, it is not clear that large government expenditures on housing, such as those by the MHF, are essential for improving housing conditions. Of far more importance is the development of institutional mechanisms other than government transfers that can satisfy this demand. Indeed, this strong demand for housing can be an opportunity to increase financial resource mobiliziation rather than an obligation to provide more subsidies.

The Paradox of "Does Housing Finance Matter?"

2.05 Until the late 1970's, the share of housing investment financed through the formal financial system in Turkey was one-fourth to one-half of the level of other countries at similar levels of development. Yet for the period as a whole, the share in GDP of fixed-capital formation invested in housing in Turkey corresponds to that of other countries at its level of income. From this perspective it appears that the amount of formal housing finance does not matter. Less finance for housing did not result in less housing. The lower level of credit supplied appears to have had no long-run effect on the level of housing investment.

2.06 But, as will be shown, this impression changes when longer-term trends are examined more closely. In fact, housing investment as a share of GDP in Turkey has been more than twice as volatile as comparator countries. These boom and bust cycles, in turn, create a similarly

cyclically-sensitive political dimension to housing policy which results in large transfers. They also very likely contribute to the sharp increase in the real prices of construction inputs. Hence, while the supply of housing finance may not appear to be of much consequence as far as the level of housing investment, it can matter a great deal. It can increase the level of government expenditures necessary to cover housing costs, and it can ultimately affect the equitability of the urbanization process. A more resilient supply of housing finance would help moderate these cycles and their attendant adverse side effects.

The Paradox of Falling Wages and Increasing Housing Demand

2.07 Finally, at the same time that the real wages of many middle-income families in Turkey have undergone some of the sharpest reductions in their history--reductions on a par with the reductions that occurred in the US during the Great Depression--the demand for housing as reflected in construction costs and the level of housing investment has been increasing dramatically. Clearly, much more than income growth and urbanization is involved with the behavior of housing demand in Turkey.

2.08 Financial policies which have paid negative real returns to financial savings have made tangible assets, such as housing, very attractive investments, and they have also discouraged participation in the formal financial sector. On the other hand, however, financial liberalization policies that permit interest rates to change with changes in the inflation rate have made housing investment much less affordable because of cash-flow problems rather than costs. In other words, a financial liberalization policy that does include some means of dealing with the

inflation-related costs of finance for housing is incomplete. It is also one that has shown that it can generate pressures for public expenditures to substitute for the lack of credit.

2.09 To sum up, the macroeconomic linkages of housing investment and housing finance in Turkey are many and complex. Nevertheless, it is clear that the current high-level housing investment can have adverse implications for the level of economic growth. Even though the levels of housing investment required are large, too much investment in housing in too short a period can lead to less economic growth and therefore even greater housing need. In short, too much housing investment is as bad as too little. Conversely, the present lack of housing finance loan instruments that allow mortgage payments to be made in inflation-adjusted terms leads to more volatile housing production, higher housing costs, and higher government expenditures on the sector. Too little mortgage credit supplied by the financial system is as bad as too much mortgage credit.

2.10 The central long-term role for the MHF should not be one that focuses only on producing more housing. Its central role should be to help stabilize housing investment at levels that can be accommodated by domestic financial resources. An important secondary objective should be to use the attractiveness of homeownership to Turkish households to induce more savings to be placed in financial assets. Turkish housing needs can best be met by developing a housing finance system that recognizes the macroeconomic linkages of housing investment and uses these linkages to further economic growth and resource mobilization. A restructured MHF can play an important role in developing such a system. In order to identify how it can do so,

housing investment linkages to the economy need to be traced through. In the next chapter the factors that affect the underlying demand for housing investment as shelter are described. Then, Chapter IV examines the demand for housing for investment purposes and the role financial conditions can play in this demand.

CHAPTER III.

THE HOUSING SECTOR AND UNDERLYING ECONOMIC CONDITIONS

3.01 In the 1980's Turkey experienced a number of economic and demographic changes which affected the demand for housing: changes in income and the cost of inputs in housing production, and rapid urbanization. Some perspective on these changes can be gained from comparisons with the conditions of other countries.

A. Economic Growth

3.02 As Table 3.1 suggests, Turkey's economic performance, as measured by the growth in real per capita income, has been relatively strong during the 1980's. The Table indicates that over the 1965-79 period Turkish per capita income grew much less rapidly than did that of its comparators, but during the 1980's, its performance has been much stronger. The second column in the Table compares Turkey's per capita income level with the averages of two comparator groups and middle-income countries generally. It indicates that per capita income in Turkey is about 5 percent higher than the Group 1 comparators, 18 percent lower than the Group 2 comparators, and about 10 percent less than middle-income comparators.

Table 3.1: PER CAPITA INCOME AND INFLATION
TURKEY AND COMPARATORS 1965-86

	Per Capita Income 1986	Growth in P.C. Income 1965-79	Growth in P.C. Income 1980-86	Average Rate of Inflation 1980-86
Turkey	1140	2.8	2.4	37.3
Group 1	1080	5.6	1.6	7.6
Group 2	1390	3.8	-1.0	34.0
Middle-income countries	1270	3.8	-0.5	

Group 1 Includes: Egypt, Malaysia, Morocco, and Tunisia
Group 2 Includes: Chile, Colombia, Ecuador and Mexico +

Source: Various World Development Reports.

3.03 The comparator countries were selected on the basis of data availability of housing market characteristics of countries with similar income levels. Two types of comparators were used to help identify differences between high and low inflation countries. As the column on the right shows, the Turkish inflation rate has been similar to the Group 2 comparators, but a multiple of the Group 1 comparators.

3.04 One of the key components of Turkey's relatively strong performance in the 1980's has been an outwardly-oriented growth strategy which, among other things, has led to reductions in earnings for some workers. It is very difficult to say how much wages were reduced. However, for many wage-earners, and particularly those in the public sector, it appears that the real wage reductions of the 1980s, were similar in magnitude to the reductions wage-earners in the United States faced in the 1930s. Table 3.2 summarizes aggregate earnings trends.

Table 3.2: EARNINGS PER EMPLOYEE
Annual Growth rates

	1970-80	1980-85
Turkey	+3.7	-3.5
Group 1 Comparators	+3.4	+0.5
Group 2 Comparators	+1.0	+1.4

Source: World Development Report 1988.

3.05 Comparing Tables 3.1 and 3.2 suggests that the Turkish reductions in earnings per employee over the 1980s are particularly striking. Although Turkey had the slowest growth in per capita income in the earlier period, it also had the largest increase in employee earnings. In the latter period, this role is reversed. Even though it had the largest gains in per capita income, it also had the only reduction in average real earnings per employee. Recent studies have suggested that the real wage reductions of recent years have been a key component of the Turkish export-led growth strategy. Reducing real wages has helped to make Turkish industry more competitive on international markets, but it has placed a serious strain on household budgets and especially on the ability of households to afford housing.

The Wage Reductions: Some Context

3.06 The background against which wage reductions took place is one of massive and continuing changes. For example, outside of Korea, in recent years Turkey has experienced the world's largest increase in the share of GDP produced by the manufacturing sector. Nevertheless, more than half of

the civilian labor force (58 percent), remains in the agriculture sector, as opposed to 42 and 31 percent in the two comparator groups. Hence, significant rural-urban population shifts are likely to continue to place upward pressure on both already high urbanization trends, as well as the 12-13 percent overall unemployment rate.

Household Income and Housing Expenditures

3.07 To infer what this environment of economic growth with wage reductions implies for housing demand is impossible without survey work. Unfortunately, no comprehensive, nationwide income and/or expenditure survey has been carried out in urban areas since 1978-79 when the data showed that the average urban household spent 13-14 percent of its income on housing. However, using SII wage data, it is possible to create an approximate urban income distribution for 1985 by inflating the earlier figures by subsequent wage and price trends. These adjusted figures can then be compared with the results of a survey in the Adana region done in connection with a World Bank Financial Project. The distribution of the income data of the adjusted figures is very similar to that of the recent Adana survey. As a result, the latter results can be used to draw some tenative conclusions about urban family expenditure patterns on housing.

3.08 The Adana survey showed that middle-income households (LT50,000-70,000 per month) spent about 20 percent of income on housing. This proportion increases to 30 percent for the typical low-income household (LT30,000-50,000 per month). Less than one-tenth of the low-income households spent more than 30 percent of their incomes on housing.

Table 3.3: URBAN INCOME DISTRIBUTION
(LT '0000 per month)
(October 1985)

Adana Percentile	National Survey/a Household Survey	National Survey/a Updated
10	33	33
20	41	42
30	48	51
40	55	59
50	63	69
60	73	83
70	86	101
80	103	124
90	138	183

/a 1978/79 data were adjusted with wage index to mid-1984 and with consumer price index from mid-1984 to October 1985.

Source: SPO and IBRD estimates.

3.09 By international standards, these are relatively large expenditures on housing, particularly by the lower-income households. They are, however, consistent survey results.[3/] "More housing" was a uniform desire across the income spectrum. Hence, it appears that households are either willing, or as a result of supply conditions, are being forced to spend a significant share of their income on housing. This, in turn, suggests that the demand for housing is likely to remain relatively strong even if recent real wages continue. Given the existing housing expenditure patterns, there is likely to be a strong and continuing underlying demand for new housing.

3/ Ibid.

B. Urbanization Trends

3.10 Urbanization trends have also been a major factor in the demand for housing and urban services. Turkey is one of the world's most rapidly urbanizing countries with a rate of growth of urban population of 4.6 percent per year over the 1980-87 period. In 1987, approximately one-half of its nearly 52 million citizens lived in urban centers of over 20,000 people. Recent projections indicate that the population of Turkey will increase from 51.4 million in 1985 to about 74 million by the end of the century.

3.11 Between 1970 and 1985 the urban population grew about 2 percentage points per year more rapidly than did total population growth. There were 8.5 million households in 1985 with an average household size of 5.2 persons, down from 5.7 in 1970, and 5.3 in 1980. This latter figure is similar to that of comparator groups both of which had an average of 5.3 persons per household in their latest figures. The continuing reduction in household size suggests that, at least as a first approximation, the supply of housing is expanding in line with the shifts in population.

Population Growth and Spatial Distribution

3.12 The 50 percent of the population living in cities and towns by the late 1980s represents a nearly sevenfold increase from 2.8 million (13 percent of total) in 1950. At present, the urban population is adding

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2/ State Institute of Statistics Provisional Census of Population, October 20, 1985.

about 1.2 million people a year. Somewhat over half of this growth is due to natural increase, and the remainder is due to rural-urban migration. In other words, if current trends continue, every three years, rural-urban migration will increase urban population by roughly the size of the city of Izmir, the country's third largest city.

3.13 As shown in Table 3.4, over the 1965-85 period, the share of Turkish population in cities increased by a greater amount than did the comparators. The Table also indicates that the current levels of urbanization are lower than or equal to their comparators (despite the higher growth rate). Consquently, high rates of urban population growth in Turkey are likely to continue. The rate of urbanization is likely to be significantly higher than the Group 2 comparator countries.

Table 3.4: URBAN POPULATION AS A PERCENT TOTAL

	1965	1985
Turkey	32	46
Group 1	35	46
Group 2	55	68
Middle-income economics	37	48

Source: World Development Report, The World Bank, 1988.

3.14 Turkey has a well-developed hierarchy of cities. The three major metropolitan areas have slightly over one-third of the urban population (Istanbul, 5.5 million; Ankara, 2.3 million; and Izmir, 1.5 million) although together they account for three-fourths of manufacturing plants.

In recent years, other cities (Adana, Bursa, Gaziantep, and Konya), each with populations exceeding 500,000, have emerged as metropolitan areas and have taken on increasing importance as poles of regional growth. Some 25 other cities have more than 100,000 dwellers.

3.15 Remaining Urban Service Deficiencies. While public sector investment allocations for urban infrastructure have expanded, they have been unable to meet the massive demands of the growing urban population. In addition, local planning and administrative tools are not sufficiently developed to manage the present growth of the cities. One manifestation of this mismatching of demands with limited local financial capacity is the gecekondu phenomenon: unplanned urbanization with insufficient sewerage facilities and solid waste collection, poor road surfacing, overcrowded public transport, and few parks and open spaces. These settlements--erected without permits and usually with unclear titles--represent both a market response to the scarcity of legalized serviced land and the traditional search for better employment opportunities in urban areas.

3.16 Gecekondu settlements grew from 50,000 dwelling units in 1955 to an estimated 1.2 million in 1985. These squatter settlements now form a dense maze of suburbs ringing Turkey's major cities and account for an estimated 70 percent of all housing in Ankara and the Cukurova cities, 50 percent in Istanbul, and 20 percent in Izmir. (For a fuller discussion of this, see Appendix II.) The growth of gecekondu settlements, however, should not obscure the fact that significant progress has been made in extending the coverage of urban services to previous settlements, both those developed legally and those without permits.

3.17 In established towns and cities, about 75 percent of the urban households have water and over 80 percent have electricity. With sanitation, the situation is more problematic: only 20 percent of the urban dwellings are connected to public sewerage systems, and few cities have sewerage treatment facilities. At the urban periphery coverage rates are much lower and are characterized by insufficient water, sewerage, roads (50 percent are unpaved), and limited solid waste removal. In absolute numbers, 3 million individuals lack access to electricity and/or connected to a water supply system. Nevertheless, when the backlog in urban services is constrasted with comparator countries, Turkey has experienced significant improvement over the past decades as shown in Tables 3.5-9.

Table 3.5: PERCENT OF URBAN HOUSEHOLDS WITH ACCESS TO WATER

	Within the House	Standpipe	Total	Change in 1970-80
Turkey	80	19	99	+30
Group 1	69	28	97	+5
Group 2	69	18	86	+10

Source: UN Habitat (1986). Global Report on Human Settlements, Oxford University Press.

3.18 In spite of the problems of rapid urban growth, Tables 3.5, 3.6, and 3.7 all indicate improvements in Turkish housing and urban services conditions. The gains are sometimes remarkable, particularly when contrasted with comparators. The contrast in the change in access to water is particularly noteworthy. The Turkish performance has been strong both in

terms of the rate of change and the level of provision. Its improvement on water access has been a multiple of the improvements in the comparators.

Table 3.6: PERCENT OF URBAN HOUSEHOLDS WITH ACCESS TO ELECTRICITY

	Percent of Households	Change 1970-80
Turkey	80.0	+2
Group 1	80.7	-.4
Group 2	84.2	-.2

Source: UN Habitat (1986).

Table 3.7: SELECTED HOUSING STANDARD INDICATORS: TURKEY

	1965	1970	1975	1980
Average number of rooms per dwelling	2.4	2.5	2.6	2.8
One room dwellings as percent of total (%)	24	21	15	n.a
Percent of households with				
private kitchen (%)	n.a	54	60	65
private toilet (%)	n.a	65	67	70
private bathroom (%)	n.a	44	45	49

Source: Various census.

3.19 As shown in Table 3.7, the average number of rooms per dwelling increased from 2.4 in 1965 to 2.8 in 1980 and one-room dwellings as a percentage of total dwellings decreased from 24 to 15 during same period. The percent of households in 1980 with private kitchens (65 percent),

toilets, (70 percent) and bathrooms (49 percent) also increased over the previous ten-year period.

Table 3.8: HOUSE SIZE CHARACTERISTICS
TURKEY AND COMPARATORS

	Percent of Population Living in < 2 Rooms	Average Room Size
Turkey	25.4	2.5
Group 1	58.5	2.5
Group 2	43.1	3.1

Source: UN Habitat (1986).

3.20 Table 3.8 indicates that despite similar average levels of housing space, a much smaller portion of Turkish houses consisted of less than two rooms. This distribution is consistent with a smaller proportion of the population having lower incomes than the comparators; and/or a lower mobility rate once a residence has been chosen. Finally, however, Table 3.9 indicates that Turkey still has a long way to go on providing basic sanitation.

3.21 In line with the Government's decentralization theme, and devolution of authority, increasing amounts of national tax revenues are being transferred to municipalities so that they can address the still significant shortage of infrastructure. The increase in financial resources at the disposal of the municipalities, however, appears to be in advance of the institutional strengthening they require to perform both their traditional and new functions. These administrative constraints on urban investment will limit housing investment and the quality of urban infrastructure.

Table 3.9: PERCENT OF URBAN HOUSEHOLDS WITH ACCESS TO SEWER OR SANITATION SERVICES

	Indoor Plumbing	Total Sewer System
Turkey	10	56
Group 1	35	82
Group 2	54	72

Source: UN Habitat (1986)

C. Housing Investment and Cost Trends

3.22 The typical formal sector new dwelling preferred by most Turkish families appears to be at least 100 square meters in size. This is the prototypical unit being built at the Batikent New Settlement Project in Ankara, and by other cooperatives around the country. It is also approximately the average size of units financed by MHF, 98.3 square meters. While these new units are considerably larger than the average size of the existing stock, as Table 3.10 shows, this is not an unusual result. New housing tends to be larger than existing units in most countries.

Table 3.10: SIZE DISTRIBUTION OF HOUSING STOCK

Floor Area	Share in Housing Stock
< 49	9.0
50-64	16.0
65-100	63.0
100	11

Source: Census

3.23 The 1975 census provides the most comprehensive data on home ownership. The survey found the nearly 7 million households (or 81 percent of the total) were recorded as "non-renters," implying a high degree of home ownership. This ratio drops to 60 percent in metropolitan areas and 55 percent for other urban areas. However, the preference for home ownership does not appear to stem from rent trends. Real rents have varied widely over time. However, they exhibit very little trend, and over the 1976-87 period there appears to have been little total change, with annual changes ranging from plus to minus 15 percent with an average change in absolute value of 8 percent.

3.24 During the second half of the 1970's, housing investment averaged about 17 percent of gross capital formation or about 4 percent of GNP. However, the economic crisis and the stabilization and adjustment programs of the early 1980s had major implications for housing investment. During 1981-84 it was almost 40 percent less in real terms than it was between 1978 and 1980. It was about 2 percent of GDP or 13 percent of total capital formation. The level of housing investment remained at about this level until 1984. The decline in the number of building permits from 253,000 in

1979 to 144,000 in 1981 is another indication of the magnitude of the decline in construction. By late 1983, construction of some 200,000 housing units had come to a standstill, causing numerous bankruptcies among construction companies and materials suppliers. Even allowing for some possible underestimation of housing investment, the level achieved was low for a country with Turkey's level of development.

3.25 The disruption of the Turkish economy and of the Turkish financial sector in the early 1980s is well-documented. The economic crisis and the stabilization and adjustment programs that followed led to high rates of inflation and high nominal and real interest rates. These had a particularly devastating effect on the housing sector. In an environment with inflation often in excess of 30 percent per year and very high real interest rates (in excess of 20 percent), organized housing finance virtually ceased to exist. (See Appendix IV.) In spite of the high potential economic returns from housing investment, the high-initial payments associated with high interest fixed-payment housing loans made housing investment, at least temporarily, unaffordable to most households.

3.26 The changes in the affordability of housing, in turn, make housing production a volatile industry. Table 3.11 presents data on the variability of housing's share of GDP in Turkey and a number of comparator countries for which more than 10 years of observations could be collected.

3.27 As is clear from the Table, housing output in Turkey is much more variable than is housing output in the other countries. It is, in fact, more than twice as variable. Research for developed countries suggests that such cyclical volatility increases housing costs and reduces productivity in

Table 3.11: THE VARIABILITY OF HOUSING INVESTMENT AS A SHARE OF GDP

	Housing Share of GDP	Standarized Measure of Variability+
Turkey	3.6	.35
Morocco	5.0	.13
Malaysia	2.8	.19
Korea	5.1	.17
Colombia	2.3	.21
Greece	6.1	.20
Canada	4.7	.18
Average Comparators		.16

+ Coefficient of variation

Sources: The Malaysia, Morocco and Korean data are from World Bank studies; The Colombian data is from El Upac, la politica economica y la construccion 1970-87. CAMACOL, Bogota, Colombia, 1987; The Canadian and Greek data are from OECD Reports.

housing construction.[4/] While we do not know whether this is the case ir Turkey, the results are consistent with such as argument. Figure 1 plots out real changes in construction material costs over the 1973-mid 198[illegible] period. Real material costs follow an oscillating upward trend, with the result that real construction material costs in June 1988 were 30 percent higher than they were in 1972, and they were 60 percent higher than the were in 1981.

3.28 Whether this behavior is due to inefficiencies in the construction industry that are reflected in delay-related costs, periodic capacity

4/ William Gibson, Brookings Papers on Economic Activity, 1972.

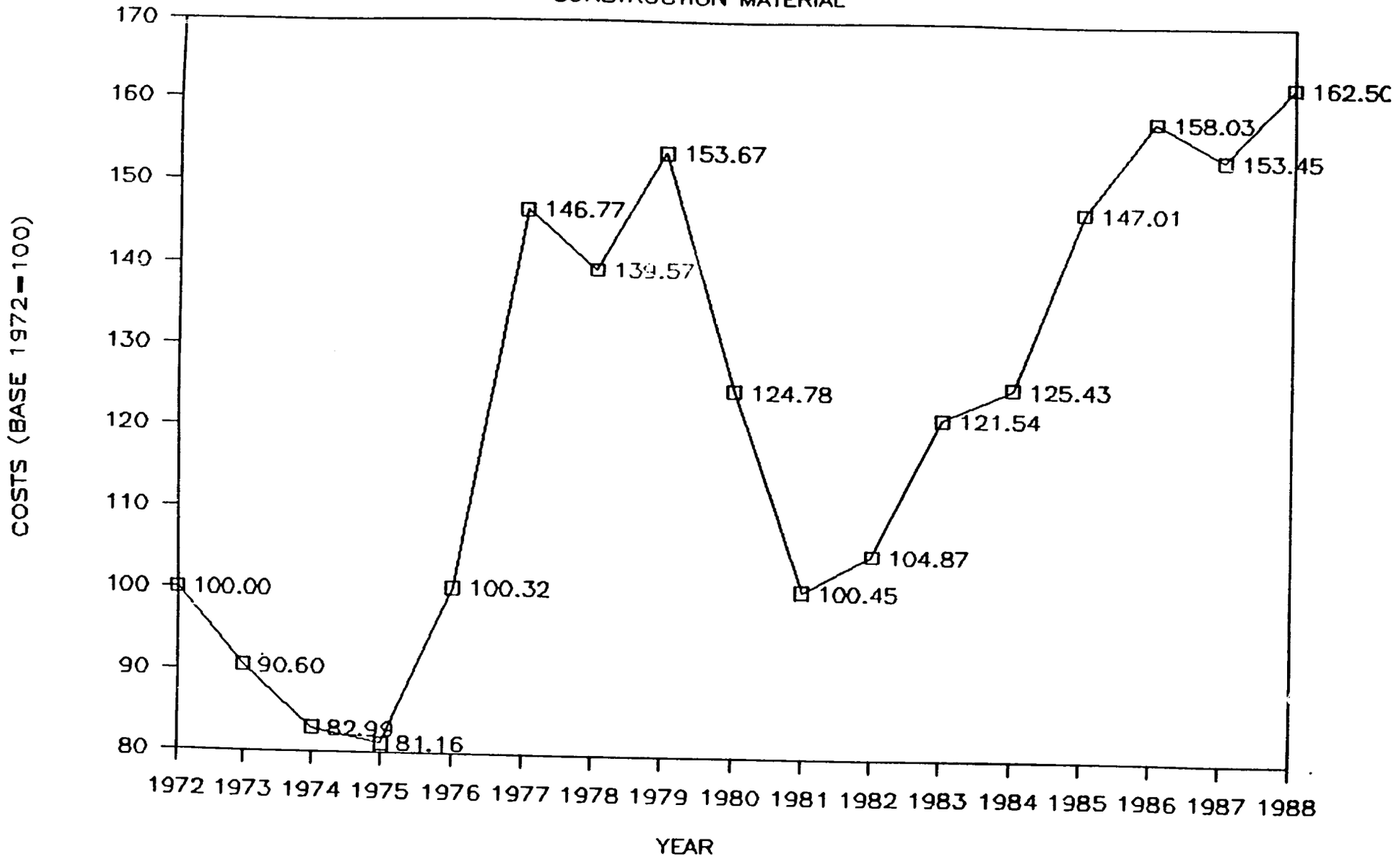
constraints on basic industries (e.g. cement), heavy credit subsidies discouraging puchaser price sensitivity, or the pricing behavior of State Enterprises that supply materials is not known. However, the trend is a disturbing one. (Appendix III describes levels of construction and its composition).

Summary

3.29 The domimant characteristic of the Turkish economy has been rapid change: it has experienced some of the world's largest shifts in population and in employment orientation, some of the sharpest real wage reductions, as well as some of the most significant improvements in basic infrastructural services. Most importantly it has had continuing economic growth and pursued an aggressively liberalizing set of economic policies. Moreover, the pace of change is by no means slackening. There still is a large share of the population employed in the agricultural sector that will, in coming years, shift to urban jobs and houses. Unfortunately, the Turkish housing finance and delivery mechanism is not yet able to withstand the pressures associated with these basic developmental shifts. Housing production is extremely volatile, production is time-consuming and inefficient, and real housing costs have increased sharply. Perhaps most importantly, however, government resources, by themselves, are not of a sufficient scale to offset the disruptions associated with these basic changes in the structures of the Turkish economy. In the next chapter, the scale of the MHF transfers to the sector and the policy environment that constrain these transfers is described.

FIGURE 1

CHANGES IN THE REAL COSTS OI



CHAPTER IV

THE HOUSING SECTOR AND THE POLICY ENVIRONMENT

4.01 Three aspects of the policy environment are important for an appreciation of why the MHF was created and how this institution could be restructured so that it would be more consistent with the long-term policy framework rather than short-run adjustment problems. The aspects are: (i) the effects of very high rates of inflation on housing affordability; (ii) the effects of financial sector policies to deregulate interest rates when there are no mortgage instruments that adjust payments for inflation; and (iii) the emphasis on export growth, and the pressure this policy can place on wages and, ultimately on household ability to repay mortgages.

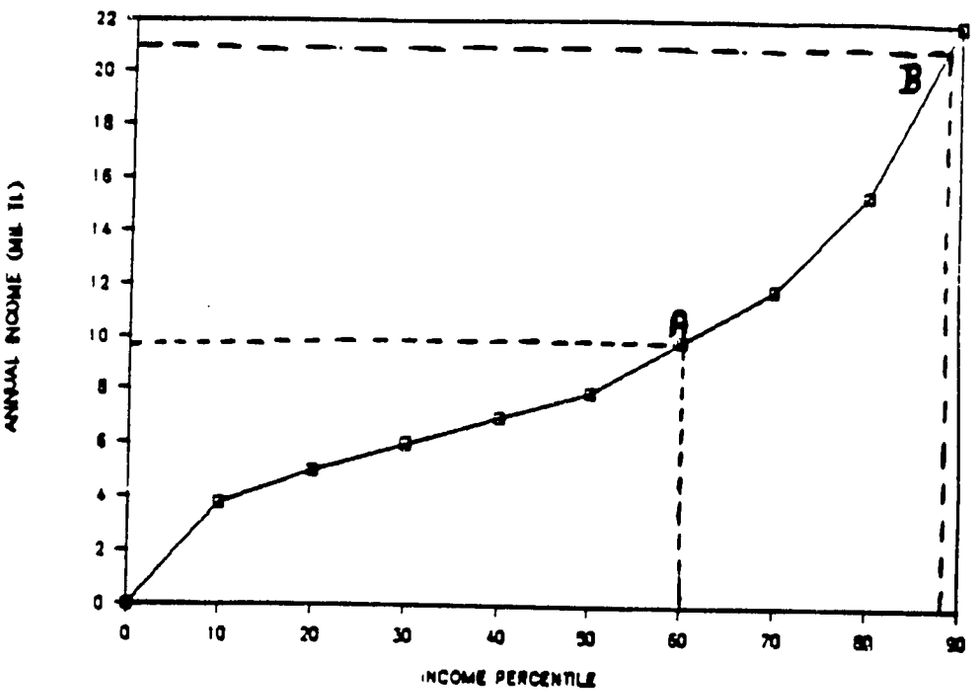
A. Inflation and Housing Affordability

4.02 Table 3.1 suggests that a key feature of the Turkish economy is its relatively high rate of inflation, over 37 percent per annum over the 1980-86 period. However, unlike its Latin American comparators, i.e. group 2, such high rates of inflation are a relatively recent phenomenon in Turkey. For example, over the 1950-75 period, the average inflation rate was only 8.6 percent per year, and it was without trend. It is only since 1977 that the inflation rate took its currently virulent form.

4.03 Figure 2 plots the income distribution figures for urban households given in Table 3.3. Point A presents an estimate of the share of the urban population that could afford to pay 25 percent of its income to finance a house that cost three times the initial income of the median income

Figure 2

Share of Turkish Urban Households Able to Afford Mortgage Repayments with Different Rates of Inflation



household with a 20-year loan for 70 percent of the house value. These were approximately the financing terms made available by the specialized mortgate lender, Emlak Bank, prior to the mid-1970's. The most important financing term is the interest rate on the loan. If we assume the interest rate reflects a 6 percent real interest rate and the 9 percent rate of inflation, that characterized the 1950-75 period, it would be 15 percent. Under this relatively mild rate of inflation, a household at roughly the 60th percentile of income could afford what might be termed the median-priced house, i.e. a house that was three times the income of the median income household.

4.04 Point B, on the other hand, shows the income level needed to amortize the same loan on the same house if the inflation rate increased from 9 to 30 percent, as it has since 1975. As the figure suggests, with only fixed-interest rate mortgage contracts, inflation, by itself makes housing no longer affordable for a large portion of home-buying households. The calculations ignore the 30 percent increase in construction material costs over the period which would cause a house worth three times income at the beginning of the period to cost closer to four times income at the end of the period. They also ignore the much higher real borrowing rates that characterize current borrowing conditions. Hence, the assumptions significantly understate the extent of the housing affordability problem and how it has changed since the mid-1970s.

4.05 Nevertheless, they serve to emphasize the effects of the increase in the inflation rate on mortgage affordability when repayments are made in nominal terms. In this kind of context it is no wonder that housing production in Turkey oscillates so widely. A house that was affordable at the time a lot was purchased can quickly become unaffordable. Nor is it surprising that less long-term fixed rate credit is made available. The interest rate swings associated with the higher and more volatile inflation rates would subject lenders to too much interest rate risk.

4.06 The MHF's low inflation-adjusted interest rates can be seen as a government policy response to this crisis of credit affordability. It represents an effort on the part of the government to shift some of the disproportionate costs of inflation away from the housing sector. Because housing is one of the most long-lived goods in the economy and is ubiquitously consumed, its production is particularly sensitive to changes

in inflation and more generally financial market conditions. However, because this good is so heavily demanded in a rapidly urbanizing economy, it is clear that government transfers to the sector cannot be of a sufficient scale to fully insulate the sector from financial market conditions. The basic on-going demands are too great to be met by government transfers. Indeed, as is discussed in the next section, attempts to provide such insulation are ultimately similar to shooting at a moving target. The increases in transfers to the sector merely increase the demand for transfers by a greater amount.

B. Interest Rate Policy and the Allocation of Savings

4.07 Higher inflation and the fixed nominal interest rates also affect the demand for assets besides housing. For example, the tabulations in Table 4.1 present Turkish holdings of monetary assets as a share of GDP for various years. In 1965, these holdings exceeded those of the high inflation comparators, and they were equal to about 75 percent of the level of the low inflation comparator group. By 1980, following the sudden increase in the Turkish inflation rate to over 100 percent per year, Turkish monetary holdings contracted. In contrast, the holdings of the low inflation comparators increased by 70 percent, and the recently indexed Latin American monetary assets increased by 15 percent. By 1985-86, the cautious pursuit of financial liberalization increased the Turkish monetary holdings by 50 percent, to a level similar to its Latin American comparators. Unfortunately, it was also a level that was only one-third that of its low inflation comparators.

Table 4.1: MONETARY HOLDINGS BROADLY DEFINED AS A PERCENT OF GDP

	1965	1980	1985 or 86
Turkey	23.0	16.7	25.4
Group 1 Comparators*	30.3	51.8	76.7
Group 2 Comparators*	19.7	22.6	27.5

*See Table 3.1 for identity of members of the group.
Source: Various WDRs, Column 3 is the most recent data.

4.08 This explanation of a simplified measure of Turkish financial deepening obviously glosses over a complex history. However, it helps to stress three points:

4.09 First, a low and stagnating share of financial assets suggests that the urbanization trends that created increases in demand for credit did not generate a similar increase in supply. As a result, the share of capital formation that takes place in housing is not self-generating, but competitive with other uses of credit. Data from Kent Koop, an apex housing cooperative institution in Ankara, indicate that this is certainly the case. Over the 1973-84 period new mortgage credit issued averaged less than 10 percent of housing investment, on the order of 7 to 8 percent. (See Appendix IV for a discussion of formal housing finance in Turkey). In contrast, in countries like Malaysia net new mortgage debt issued has exceeded 60 percent of housing investment; in Colombia in recent years it has equaled 90 percent, and in Mexico, Morocco, and Tunisia housing credit has been equal to 20 to 40 percent of housing investment.

4.10 Second, there is substantial evidence that in developed economies cyclical housing production levels are strongly affected by the kind of credit rationing that necessarily characterizes such constrained formal sector lending. According to this perspective interest rate ceilings on mortgages and the deposits that financed them allowed monetary policy to drawn resources out of the sector with small interest rate increases. Because this credit financed the production of a long-lived good with highly mobile resources (little fixed capital), the results were a relatively "painless" stabilization program, Harberger (1972).1/ It seems very likely that the extensive rationing of credit in Turkey plays a similarly significant role in housing production's pronounced volatility. The lack of a stable supply of mortgage credit almost certainly exacerbates the swings in housing demand due to changes in financial market conditions. It also reduces the efficiency of the construction industry and increases housing costs.

4.11 Finally, until recent years, the absence of financial assets that yielded positive inflation-adjusted interest rates was similar to placing a greater than 100 percent tax on this form of savings. Because resources could avoid these "taxes" only if they were invested outside the formal financial sector, formal financial sector growth was retarded. The small share of financial asset holdings is consistent with households holding considerable amounts of wealth in foreign exchange or real-denominated assets such as gold, real estate and land. Not only does such a savings pattern increase the costs of financial intermediation, it can also serve to bid up urban land and house prices. This price esculation is particularly

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1/ Harberger, A. Housing and Montegary Policy, Boston Fed. Reserve, 1972.

likely in a rapidly urbanizing economy such as Turkey in which the supply of the range of urban services that accompany housing is likely to be inelastically supplied. These higher house prices, in turn, make formal housing much less affordable for lower income households.

4.12 These kinds of investment patterns generated efficiency losses for the economy. To analyze the magnitude of these welfare losses an existing model was modified to consider stylized facts about the Turkish economy. The model (is spelled out in Appendix V) suggests that the costs of these kinds of selective credit policies may have been as high as 6 percent of GDP. These high welfare losses occur because a high tax rate was being applied to what is ultimately a flexible, mobile resource--the form in which savings are held.

4.13 This kind of analysis suggests that the GOT's movement towards greater reliance on market interest rates is likely to generate significant long-terms benefits to the Turkish economy. However, it also suggests that greater reliance on market interest rates is also likely to generate lower demand for housing as a means of wealth-holding. In the presence of financial assets with a return that is not severely eroded by the inflation rate the demand for housing as an asset should fall. It is important to recognize that while this kind of reduction in the demand for housing may create short-run adjustment problems, e.g., a temporarily less profitable construction industry, it is ultimately part of a portfolio shift away from inflation hedges, such as real estate, and into the financial sector.

4.14 Since 1982 Turkish financial policy has attempted to liberalize financial market interest rates and thereby reduce the large welfare costs

to the economy of the interaction of fixed nominal interest rates and high and variable rates of inflation. However, this policy of liberalization has not been extended to the interest rates that apply to housing loans. Instead government policy has relied on tax resources rather than financial resources to finance housing. The result has been an increase in housing production, but also an even greater increase in the demand for these subsidies. Rather than helping to reduce the demand for inflation hedges, this policy has ultimately contributed to an increase in demand for these kinds of investments.

C. The MHF and Wage Policy

4.15 While the interpretation of Turkish wage and income trends is complicated by the choice of the base year, it is clear, regardless of what index is used, that real wages for many workers have fallen significantly in the 1980-86 period. For example, the share of wages in national income is estimated to have fallen from 33 percent in 1979 to 17 percent in 1987. As Table 3.2 suggests this is not the kind of adjustment that was made in most comparator countries. It is, however, an approach that appears to have contributed to Turkey's increased exports and higher growth. It is also a policy that can substantially increase the risks of mortgage lending.

4.16 These broader wage trends should be kept in mind for an understanding of why the MHF was created. They are important because rather than being strictly a housing program MHF expenditures, in many respects, are part of a policy that reduced the pressure to keep wage increases in line with increases in the inflation rate. In effect, the MHF subsidies were targeted on one of the most important household concerns--housing--

rather than on income transfers through inflated wages, as was the case in many Latin American contries. (See the comparisons of wages and per capita income in Tables 3.1 and 3.2.)

4.17 To consider how MHF policy complements wage policy, it is helpful to get a benchmark measure of how "large" the MHF subsidies were relative to the wage reductions that have occurred. MHF funds been distributed to about 12 percent of all urban households. (See Appendix VI for details on the number of MHF beneficiaries.) The size of the per unit MHF subsidy is equal to approximately 50 percent of the annual income of the median income urban household. Consequently, according to a simple aggregate measure, the MHF's subsidies have been equivalent to giving a real wage increase of about 6 percent for all urban households. (.12 x .5 = .06). However, because there is more than one wage earner per household this figure is lower when secondary wage earners are taken into account. The magnitude of the MHF subsidy, inclusive of secondary workers, is probably closer to about a 4 percent real wage increase for all urban households. This aggregate figure, in turn, is comparable to about 25 percent of the wage reduction experienced since the Fund began operations.

4.18 In this "cushioning wage reductions" context, MHF expenditures can be viewed as an in-kind transfer that: (i) cushioned real wage reductions without direct deleterious effects on export-promotion; (ii) was rationed to beneficiaries on the basis of their willingness to save and mobilize a significant amount of their own resources; and (iii) has been targeted on a good in which Turks place great value. In all of these respects, the MHF served its purpose very well. Hence, not only were the transfers distributed relatively effectively, their distribution did not increase

labor costs. With the MHF approach to subsidy distribution the total costs of producing tradable goods were lower than they would have been if the transfer had been given directly through wages.

4.19 However, the MHF has also been targeted: (i) on a good that is unaffordable largely because of the absence of a financial contract that would permit families to issue debt to purchase; (ii) targeted in a way that creates a perverse housing demand response to macroeconomic conditions: when inflation increases the subsidy becomes larger and households demand even more housing.

4.20 The Turkish record of sustained economic growth over the 1980s is a remarkable one. It is also one in which effective economic management has clearly played a significant role. The deregulation of interest rates, the export-led growth strategy, and the painful reduction in real wages are all measures of policy-makers' far-sightedness. In the long run these policies will substantially benefit the economy. However, these long-run measures are being enacted in a highly dynamic, rapidly changing economy that does not have the institutional capability to easily adjust to them. The development and growth of Extra Budgetary Funds, such as the second largest one the MHF, and the high and persistent rates of inflation should be seen in this context. They are the result of efforts by the GOT to cushion the costs of adjustment of a rapidly modernizing economy. Efforts that are necessary because the institutional capacity that is essential for Turkey to continue its market-oriented economic policy program is absent in the housing sector. The next chapter discusses the mechanics of MHF operations so that the followign chapter can discuss how it could be restructured.

CHAPTER V

THE MASS HOUSING FUND

A. Operational Structure

5.01 While the details of the structure of the MHF are complicated (See Appendix VI for more details), the idea is elegantly simple: (i) place a tax largely on imports, foreign travel and tobacco (LT436 billion in 1987, and LT645 billion in 1988); (ii) dispense the funds mobilized through the existing banking system to households on "affordable" terms; (iii) provide both construction period and long-term mortgages; and (iv) ration credit to those families who are willing to mobilize significant resources of their own. The simplicity of the approach allows the program to dispense funds very quickly, and both speed up housing production and help cushion real wage reductions.

5.02 The Fund was created in 1984 in reaction to the slump in housing production. It is the second largest extra-budgetary fund in the Turkish economy and is headquartered in Ankara. While its primary focus is providing funds for housing, it also lends to municipalities for land purchases and housing-related expenditures, including infrastructure and tourism development. An important feature of the program is its reliance on the private sector to provide many of the services. The use of the banking system appropriately uses existing banking sector staff to supply financial services (e.g., disbursements and recovery), and construction is undertaken by private builders.

5.03 The key problems of the Fund's operation are, first, the structure

of the instrument used to make the loans affordable. It is such that the fund is not self-sufficient. The interest rate on its mortgages is fixed at well below the inflation rate. Consequently, the real economic value of repayments is dissipated. Second, the rationing device used to allocate the funds--small loan sizes--is an effective way to discriminate between those who value the subsidy and those who do not, but it has created ancillary problems. Subsidies have gone to those who had resources that could be mobilized relatively quickly, rather than those with housing needs but no resources. Finally, at present, the MHF is essentially the only provider of mortgage credit in Turkey. The MHF has replaced rather than augmented the private sector's financing of mortgage credit.

B. Revenue and Expenditure

5.04 Over the 1984-87 period, the four largest revenue sources of MHF accounted to nearly 80 percent of total revenues, taxes on tobacco, domestic and imported alcohol, fuel oil and charges on imports. During the 1984-87 period, nearly 88 percent of expenditures comprised housing credit to cooperatives and individuals. In 1988, these credits are expected to comprise 70 percent of total expenditures with increases in credit extended for expropriation and infrastructure provision.

Housing Credit Program

5.05 The MHF's major function is administering a credit for construction and/or purchase of a newly constructed dwellings to both building cooperatives and individuals. At the time of its original formation, nearly 200,000 units were under construction by building cooperatives, many of them previously financed through the EKB, the

government's housing finance bank. The MHF took over as the major source of finance for co-op construction. Credit is made available to cooperatives when construction reaches ground level (about 10 percent completion). Credit disbursement then continues over the remaining construction period. From 1984 through August 1988, approximately 160,000 cooperative units had been completed and about 340,000 were still under construction.

5.06 The amount of credit offered by MHF in 1984 was proportional to the size of the unit to be built, ranging from LT1.75 million (US$4,772) for a unit less than 60M2 to LT3.250 million (US$8,865) for a unit between 100 and 150M2. Rates of interest and term of loan also varied from 15 to 20 percent depending on the size of the unit and its location, in or outside of designated mass housing areas. At that time a typical 100M2 unit in Ankara cost at minimum LT4.275 million, with land provided at low cost by the municipality. With credit of LT3.250 million, a 25 percent down payment was required.

5.07 As construction costs and interest rates rose, the MHF increased nominal amounts of credit available and raised interest rates. In April 1985, an additional LT500,000 (US$950) of credit was made available upon 50 percent completion. In 1988, to encourage the construction of smaller units and better target the program, the basic credit amount was set at LT4.5 million (US$3,332) with the interest varying from 15 to 25 percent (Table 4.1), depending on size.

Table 5.1: MHF MORTGAGE TERMS AND INTEREST

Unit Size (m2)	Basic Credit Limit (LT)	Interest Rate (%)	Term (YRS)	Customer Share Acct (LT)
to 60m2	4,500,000	15	15	300,000
61 - 80m2	4,500,000	17	15	300,000
81 - 100m2	4,500,000	20	15	300,000
101 - 150m2	4,500,000	25	15	300,000

Source: MHF

5.08 Basic construction credit and supplementary credit at 50 percent and/or 90 percent completion is capitalized over the construction period. The supplementary credit is capitalized at a higher rate (now 40 percent), and upon completion the principle and capitalized interest are repayable at the interest rate associated with the basic credit over 15 years. Recent estimates of housing costs and credit available indicate that MHF financed less than 40 percent of construction costs; the remaining 60 percent was met from household resources. The August 1988 estimate of minimum cost for the average 100M2 unit was LT17.5 million. Assuming a total of credit of LT6.5 million is obtained from MHF sources (LT4.5 million basic caredit and LT2.0 million in supplemental credit) and an additional LT1.0 million is obtained fraom SSK through MHF, the remaining LT10 million (57 percent) would be considered the down payment. This includes only the cost of construction. Land and infrastructure costs increase further the percentage of total costs to be met with the buyer's personal resources.

Types of Units financed

5.09 As shown in Table 4.2, nearly 60 percent of the units financed by

the MHF were in the range of 81 to 100M2. The relatively large size 100M2 unit has been described as the 'preferred' housing size, in Turkey. It is larger than typical units found in Europe and by most world standards would not be considered "low-income". Despite incentives of lower interest rates by the MHF to encourage construction of smaller size units, most of the units benefited by the program appear not to have been of smaller sizes targeted to lower income groups.

Table 5.2: UNITS RECEIVING MHF HOUSING CREDIT BY HOUSING SIZE

Size	No. of Units	Percentage
Under 60 m2	5,392	0.9
61-8 m2	47,327	7.9
81-100 m2	357,049	59.6
101-150 m2	189,308	31.6
Total	599,076	100.0

Table 5.3: COMMITMENTS AND COMPLETIONS OF UNITS RECEIVING MHF CREDIT, BY TYPE OF UNITS

Old Cooperatives	187.6	31.3	63.0	17.9	33.6	
New Cooperatives	253.1	42.2	222.9	63.4	88.1	
Outside MH Areas	67.5	11.3	57.3	16.3	84.8	
Individual Housing Credit	82.4	13.8	.0	.0	.0	MHF Developed
Housing	8.1	1.4	8.1	2.3	100	
Martyred Police Family Housing	.3	-	.0	.0	.0	
TOTAL	559.1	100	351.3	100	58.6	

C. Summary of MHF Activities to Date

5.10 MHF's program has had a substantial impact. Since its creation it has provided financing for about 600,000 housing units. It has played an important part in the revival of the construction industry and related employment. Housing investment has grown to a level of about 3.5-4.0 percent of GDP, and MHF alone is financing housing valued at about 2 percent of GDP per year. The revival of housing construction and the availability of affordable mortgage terms has helped large numbers of urban households to gain access to home ownership.

5.11 In spite of MHF's considerable success, several problems can be identified which would become more serious if adjustments are not made.

5.12 First, the program has become a larger expense to government at a time when there is a need to reduce the government budget deficit and the public sector borrowing requirement. Recognizing this, the government has decided to transfer 30 percent of MHF's and most other EBF'S 1988 revenues

to general government revenue. The program, however, remains expensive, especially in view of the high current rates of inflation (50-60 percent) and the low average lending rate (15-20 percent).

5.13 The availability of large amounts of credit at negative real interest rates may be distorting the use of real resources. More analysis is required, but it appears that land use, infrastructure and housing standards in recent projects may have been over designed with the anticipation of subsidized credit to make the housing units affordable. More appropriate standards may be required in conjunction with more realistically priced credit.

5.14 Second, there are a number of problems with subsidy targeting. The subsidy mechanism was developed quickly in a financially disrupted economy to speed up production. Hence, it is not surprising that a number of problems are associated with it. For example, the level of subsidy (i) is not transparent or usually measured; (ii) is dependent on the rate of inflation rather than a policy choice; (iii) takes up too large a portion of the fund's expenditure on each loan; (iv) is too broadly targeted so that many of those in need do not receive assistance and vice versa; (v) could be much more effectively linked to infrastructure provision; (vi) takes far too long to construct the units that receive the subsidies; and (vii) takes up a large amount of the MHF disbursement per unit but a small amount of housing costs.

5.15 Adjustment of the subsidy distribution mechanism would yield high returns. The provision of subsidies by MHF on such a large scale is creating high expectations about the level and terms of assistance that the

government can provide to homebuyers. As suggested in Chapter II, it is likely to be difficult to meet and continue to satisfy these expectations over the long term without creating broader problems for the economy.

CHAPTER VI

FINANCING HOUSING THROUGH DEBT RATHER THAN SUBSIDIES

6.01 The largest problem with MHF is that is is not self-sufficient. Most of the real value of loans is not recovered from beneficiaries, and hence the MHF requires large annual capital replenishments from government sources, other than domestic financial assets.

A. Measurement of Subsidies

6.02 The unsustainability of the MHF program can be illustrated by measuring the amount of subsidy implied by fixed interest loans in a high inflation environment. By subsidy, we mean the percentage of the real value of the loan which is not recovered from beneficiaries. Two results are noteworthy. First, while it is difficult to measure how much the current subsidy is, because of the difficulties in projecting inflation and the appropriate real interest rate, the per unit subsidy level is certainly very large. With an inflation rate of 30 percent and a real interest rate of 8 percent, the subsidy on the long-term mortgage is of 50 to 60 percent of the amount loaned. For example, in Table 6.1, the implied subsidy rate is given for a 15-year mortgage with various assumptions about real interests rates, the expected inflation, and the interest rate charged by the MHF. However, the subsidies illustrated in Table 6.1 are not the full subsidy under the MHF loans, because the amount of loan balance outstanding at the beginning of the mortgage already reflects the subsidized deferred payments on construction credit (See para 5.08).

Table 5.1: CREDIT SUBSIDIES IMPLIED BY DIFFERENT INTEREST RATE TERMS

Interest Rate Charged *	Expected Inflation Rate	Real Interest Rate	Subsidy Rate
15	15	8	.32
15	30	8	.58
20	40	8	.56
20	40	6	.63
25	30	10	.33

* Assumes a 15-year maturity.

6.03 To measure how much debt is implicity forgiven in construction financing, compare the size of the outstanding liability at market interest rates with the rates under the current program. The level of subsidy depends upon the inflation and real interest rate chosen. With a 20 to 30 percent rate of inflation and an 8 percent real interest rate, the subsidy in construction period financing equals about 30 percent of the loan amount, and with higher rates of inflation or real interest rates this subsidy level increases. Depending on assumptions about inflation and real interest, the two subsidies -- the construction loan and the mortgage subsidy -- can add up to 80 to 90 percent of the loan amount.

6.04 Because the mortgage loans have cannot exceed a certain value, MHF borrowers receive smaller subsidies per house as the house size increases. At inflation rates of 30 percent or less, the per unit housing subsidy given is not large by international standards. But, the beneficiaries of these subsidies are of much higher incomes than are subsidy recipients in comparator countries. MHF financed housing is more than twice as large as

subsidized housing units in Group 1 comparators and two and a half times larger than the subsidized units in Group 2. The MHF units are 60 percent larger than the subsidized units produced in France. The problem with the subsidies is not necessarily that they are unfairly distributed but that they have substituted for household indebtedness. Most of the households who purchase the units could repay a much greater share of the loan amount if a financial instrument were used that enabled them to do so.

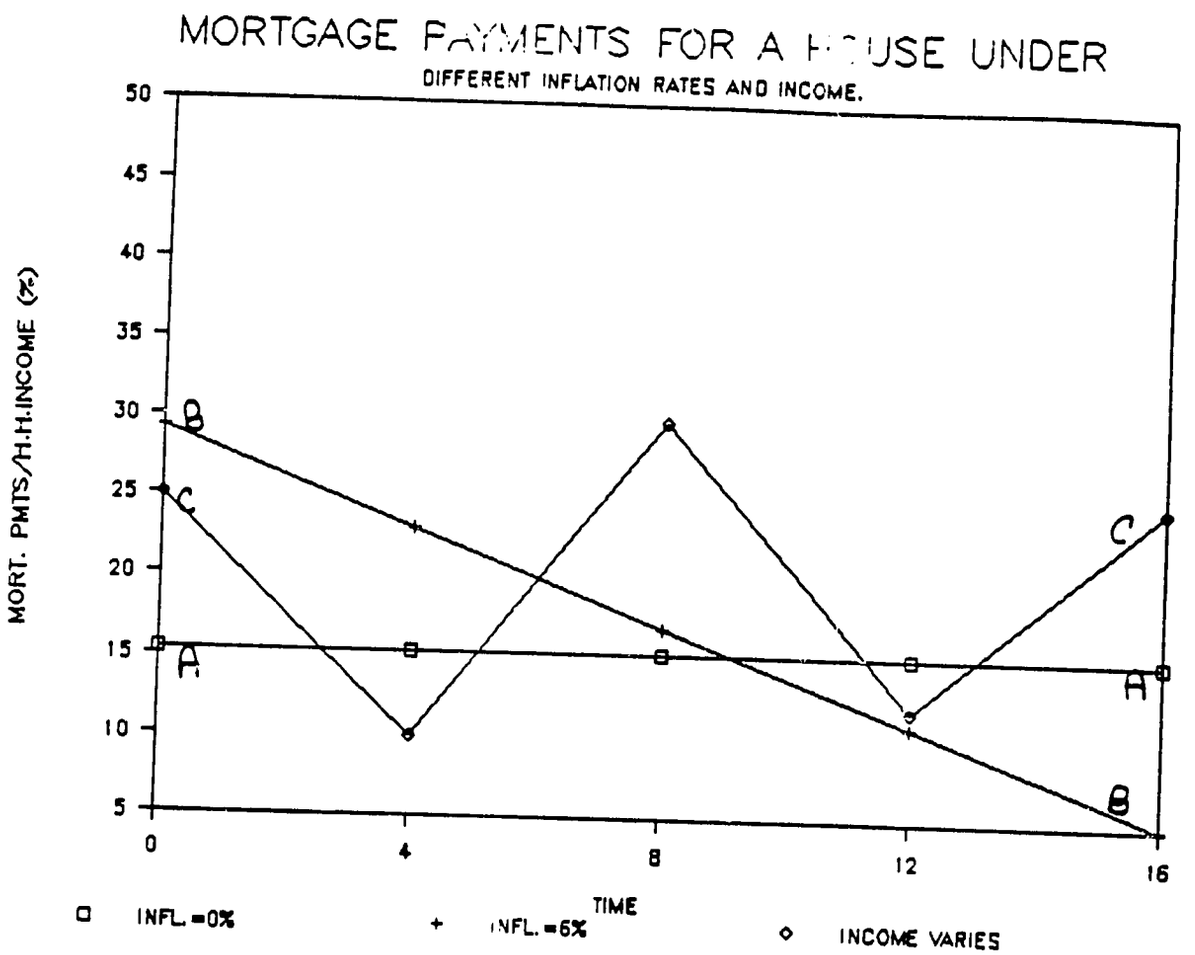
B. The Objectives of Mortgage Finance

6.05 The basic objectives of mortgage finance are two: (i) arrange mortgage repayments in a way that the repayments can be made out of a significant but relatively constant share of household earnings; and (ii) provide information to households about the real costs of both credit and housing so that they can match their expected earning streams with the size of the housing investment they are undertaking. Consider how the MHF's method of operation addresses each of these functions.

6.06 Maintaining Household Repayment Capacity. If there were no inflation and no growth in real wages and households were willing to pay 15 percent of their income to finance a house, their real payment stream would look like that of line AA in Figure 3. An increase in inflation to 10 percent and no change in real income, would change the distribution of costs to line BB. Inflation shifts or tilts costs forward and reduces household ability to repay out of income. The results depicted in Figure 2 are the outcome. On the other hand, a 20 percent reduction in real income per year over say a 2 year period also reduces repayment capacity. Such a wage change could produce a repayment pattern like curve like CC in Figure 3.

FIGURE 3

FIGURE 3



6.07 The present MHF approach to mortgage finance eliminates both of these repayment problems. It eliminates the tilting of repayments towards the early years of the loan by providing low interest rate loans. It also avoids repayment problems due to sharp wage reductions because the real value of repayments quickly become so small that even with precipitous wage reductions, these payments are still affordable.

6.08 The Provision of Information About the Cost of Resources. Because the MHF loans are not capitalized at market rates of interest during the construction period, and because this period of deferral of repayments is such a long one, 33 months, the MHF does not encourage households to seek housing units of a standard that matches their income. The opportunity cost of the inefficient construction methods utilized are not effected in the choices households make. The results are larger houses and less consumer sensitivity to the costs of construction and to the quality of the construction inputs.

6.09 Each of these problems--the high initial payments, the uncertainty of future repayment capacity, and the matching of incomes and standards--is caused by a different feature of to the MHF lending terms. However, the problems are inter-related. For example, one of the main reasons for the long construction period is the small size of the loan per unit. However, the need for a small loan size is dictated, at least in part, by the large subsidy per loan. The large credit subsidy per loan, in turn, is necessary to reduce the substantial tilting of repayments towards the early years of the loan. If there were no concerns with the possibility of sudden drops in wages the solution of these problems would be simple: adjust repayments so that inflation did not tilt repayments during the early years of the loan.

This resolution would require no subsidies for permanent finance, and consequently it would allow for larger loans, and thereby eliminate the need for construction period subsidies. However, since possible wage reductions are also a concern, the instrument must also provide for this risk.

Addressing the Mortgage Repayment "Tilt" Problem under Conditions of the Risk Wage Reductions

6.10 Constant Value Mortgages. An instrument is available that would address both the tilt problem and the wage reduction risk. The principle of the scheme is as follows: borrowers would present evidence of their current annual income and be allowed to borrow an amount whereby repayments, based on a 15-year loan and a real interest rate of 8 percent, represent, say, 20 or 25 percent of income. Payments would be adjusted annually in accordance with a real wage index. If an index of real wages falls, mortgage payments would be reduced. If the real wage index increases so, too, would payments. Payment increases would cause the loan to be paid off more rapidly, and payment decreases would cause it to be paid off more slowly. However, the term could not exceed 20 years. If a portion of the loan is unpaid after 20 years the outstanding balance would be forgiven.

6.11 The loans would be structured so that they a yield positive after-inflation rate of return and the lending arrangement would be kept very simple. The main thing the borrowers must understand is that they must pay some share of his income for housing for the next 15-20 years. If real wages do not change it would take 15 years for the loan to repay and there would be no subsidy. Hence, in the absence of wage changes the instrument would produce results identical to those of a fixed-payment loan in a world

of no inflation or income growth, i.e., schedule AA in Figure 3.

6.12 This type of constant value repayments maintains much of the simplicity of the current system. However, it has three advantages: First, it eliminates the current need for a subsidy due to a higher rate of inflation. It provides finance rather than a government transfer to address the tilt problem. This result produces its second advantage--that is, it eliminates the need to ration the loans into such small sizes that a long construction period, and hence a large construction subsidy, is needed. The reduction in construction period subsidies would help produce a better alignment of housing standards and households incomes. Finally, this approach provides households with protection against real wage reductions only if they need it, i.e., if there is a real wage decline throughout the economy. Otherwise households would be expected to be able to repay. Thus, under this approach the program would provide a kind of "insurance" that the government, through the MHF, can most effectly supply.

6.13 Columns 2 through 4 of Table 6.2 show that if an increase in the loan-to-value ratio to 75 percent of house value were sufficient to reduce the construction period to 18 months, households with various income levels could afford to buy houses of various sizes without subsidy if they spent 25 percent of their income on repayments. These households would be paying off mortgage loans that yielded a real inflation-corrected rate of return. Columns 5-7 show how much housing could be afforded with the 33-month construction period.

6.14 The Table indicates that if the construction period were shortened considerably a median income family (the middle column) could afford a 60-70 square meter house without subsidy at current construction cost levels. With the current construction period, this family can only afford a 40 square meter unit. The same units that are affordable without subsidy with an 18 month construction period would carry subsidies of 20-30 percent if the current, longer construction period remained in effect. With the current long time period for construction these subsidies can be eliminated only by much higher payment-to-income ratios or much lower amounts of housing.

Table 6.2: AFFORDABLE HOUSE SIZES IN SQUARE METERS FOR VARIOUS REAL INTEREST RATES

	Family Income Monthly LT '000					
Real Interest Rate	260	533	733	260	533	733
4 40	80	100	30	60	90	
6 30	70	90	<30	50	70	
8 30	60	80	<30	40	60	
	18 months construction period, 25 percent of income			33 months construction period, 25 percent of income		

Assumes a 75 percent loan to value ratio, constructions costs of LT230,000 square meters and no changes in real wages.

6.15 It is not clear from household expenditure data that households would be willing to pay such a large share of income for housing as 25 percent for such a long-time period. On the other hand, according to the data on housing standards (see Chapter 3) neither is it clear that Turkish households would be willing to accept the very significant reductions in

housing standards necessary to eliminate the subsidies caused by long construction periods. What is clear is that the lengthy construction period reduces the size of affordable unsubsidized housing by 10 to 20 square meters.

6.16 The figures presented in Table 6.2 are meant to illustrate how important this housing cost household income relationship is. They are not, however, intended to specify exactly what the relationship between house size, loan size, income level and length of construction period should be. They help to show how important the length of the construction period is in matching household preferences with their means. Given the discrepancy between the size of units that households can afford with and without the subsidy associated with the long construction period, an important objective of MHF regulations should be to reduce this time period. This can be done by creating a set of incentives that encourage more effective accounting for the opportunity costs of lengthy construction periods.

C. The Linkage of Mortgage Repayments to Wage Policy and Trends

6.17 The figures in Table 6.2 make the important and unrealistic assumption that real wages remain constant. In order to examine how real wage reductions of the sort that have been realized would affect the need for subsidies, it is necessary to simulate how various "futures" might affect repayments that depend on unpredictable indexes such as wages. To examine various possibilities a model was constructed and assumptions about future wage trends were made. (See Appendix VII for a description of the model.)

6.18 For the assumptions about the future wage trends, the trend of the most volatile wage index--the SSI index--over the past 15 years was extrapolated into the future in two different ways: First, the future was assumed to repeat the past with 1989 being like 1987, 1990 like 1986, and so on. In other words, the income turbulence of the past was assumed to be repeated in the early years on the loan, but then over the longer-term, a trend of moderate income growth and wage trends occurs. Alternatively, a future wage trend was simulated that repeats the past with the turbulence of the recent past towards the end of the repayment period rather than at the beginning, i.e., 1989 is like 1972 and 1990 like 1973 and so on.

6.19 Simulations of the latter scenario produced loan repayment without subsidies (and consequently the results are not presented), simulations of the former did not. These results are presented in two ways: (i) with real wage volatility and a 30 percent inflation rate; and (ii) with wage volatility and the inflation rate that declines gradually from a 60 percent level to 15 percent. The results are presented in Tables 6.3 and 6.4. For the sake of simplicity in both Tables 6.3 and 6.4 it is assumed that this matching of repayment capacity can be enforced by limiting the construction period loan to 18 months.*/

6.20 The first table shows that the current average unit financed by the MHF, i.e., 90-100 meters square, would be affordable without subsidy by households earning LT733,000 per month (approximately the 75th percentile). In order for the median-income household to be able to buy

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*/ This assumption is a short-hand way of assuming that it is possible to regulate some shorter period of construction that allows for a matching of incomes and standards without subsidy.

without subsidy, the house size must be reduced to 75-80 meters square. Even then, however, if the future is like the past, a subsidy occurs. The second table shows the effects of a higher current rate of inflation on the subsidy level. With lower housing standards, even with historical levels of inflation and real income turbulence, mortgage credit can be supplied in the proposed form with little or no subsidy. However, as the house size and inflation increases, so too does the probability of subsidy. Hence, once again the importance of an appropriate matching of housing expense and repayment capacity suggested by Table 6.2. While inflation increases the subsidy rate, the increase never reaches the level of the current program. However, it is important to note that this lower subsidy rate would be applied to a larger loan amount. Larger loan-to-value ratios are essential to reduce the construction period subsidy. As a consequence, it is possible for a lower subsidy rate per loan to result in a larger subsidy per housing unit. For example, increasing the average loan-to-value ratio from 30 to 60 percent will result in larger per unit subsidies as long as the subsidy is not reduced by at least 50 percent.

TABLE 5.3

Housing Affordability With Historical Real Income Turbulence*
30 Percent Inflation

Income % Tile	Loan Amount After 18 Mos. Unit Size	% Income Toward Mortgage Const. Period	Month-Repaid Or Present Value Of Amount Forgiven If Payments		Month - Repaid Or Present Present Value Of Amount Forgiven No Real Wage Increase		Given Historical Wages	
			Month Repaid	Subsidy Rate	Month Repaid	Subsidy Rate		
(260,000)	30	6,833,782		25	223	0	-	0.93
30	6,833,782	30		158	0	170	0	
40	9,111,709	25		-	22.5	-	25.7	
(533,000)	70	15,945,491		25	232	0	-	12.96
80	18,233,418	25		-	20.5	-	23.84	
80	18,223,418	30		213	0	-	8.61	
90	20,501,346	30		-	15.3	-	18.76	
(733,000)	90	20,501,346		25	206	0	226	0
90	20,501,341	30		-	2.9	-	6.90	
100	22,779,273	30		181	0	197	0	

*Assumes 75 percent loan-to-value ratio, construction costs of 230,000/sq.m., 8 percent real rates, and real wages behaving like the period 1972-1987 with recent years repeated first going back to 1962.

TABLE 5.4

Inflation Falling From 60 to 15 Percent and Historical Real Income Turbulence*
30 Percent Inflation

Income % Tile	Loan Amount After 18 Mos. Unit Size	% Income Toward Mortgage Const. Period	Month-Repaid Or Present Value Of Amount Forgiven If Payments		Month - Repaid Or Present Present Value Of Amount Forgiven No Real Wage Increase		Given Historical Wages	
			Month Repaid	Subsidy Rate	Month Repaid	Subsidy Rate		
(260,000)	30	8,609,880		25	-	16.9	-	19.25
30	8,609,880	30		-	9.61	-	12.42	
40	11,479,840	25		-	26.03	-	27.79	
(533,000)	70	20,089,720		25	-	21.34	-	23.40
80	22,959,680	25		-	25.35	-	27.15	
80	22,959,680	30		-	19.74	-	21.9	
90	25,829,640	30		-	23.48	-	25.4	
(733,000)	90	25,829,640		25	-	19.11	-	21.31
90	25,829,640	30		-	12.25	-	14.89	
100	28,699,600	30		-	16.36	-	18.74	

*Assumes 75 percent loan-to-value ratio, construction costs of 230,000/sq.m., 8 percent real rates, and real wages behaving like the period 1972-1987 with recent years repeated first going back to 1962.

6.21 Subsidies occur at higher rates of inflation because if real wage reductions of the scale of the past few years are realized household repayments would decline by so much that subsequent increases would not be sufficient to "catch-up" with the increase in the outstanding debt. The result is that the repayments are not sufficient to amortize the loans and forgiveness occurs.

6.22 Finally, the simulations indicate that it is impossible to insure that MHF loans can be made on an unsubsidized basis, particularly at high and lasting rates of inflation. On the other hand, if appropriate housing standards are followed, it is difficult for the per loan subsidy to be larger than it is under the current program. Further, if subsidies were realized they would be the result of government policies and beyond what households or lenders could afford to bear. Hence, there is some rationale for the government bearing these costs. Nevertheless, particularly in the current very high inflation environment, it is important to stress that there almost certainly will be subsidies if the program is begun in the current environment.

6.23 In the next chapter some methods of implementation that would reduce subsidies was well as help reduce housing demand less precipitously are presented and discussed. The chapter also elaborates on the recommendations that were presented in the Executive Summary.

CHAPTER VII

CONCLUSION

A. Recommendations

7.01 The MHF should clarify its role. The MHF should function as a financial intermediary that complements rather than competes with the private sector. Its primary role should be as an insurer that the real value of loans will not be diminished by aggregate trends in moderate-income households' ability to repay. It should, in effect, become a provider of insurance against real wage declines. There is a rationale for this insurance to be provided on subsidized basis so that it both complements the government wage policy and helps bear the cost of institution building that will yield long-term benefits. If the subsidies were targeted on providing just this one service, and not on the range of other housing-related activities now provided, the Fund could expect to support its current levels of housing production with less than 40 percent of its current resources or less. This reduction in MHF transfers would occur because supporting the same level of housing as at present would require roughly twice as much credit per unit, but this credit would receive only one fifth (or less) as much subsidy as the current program. The subsidy level therefore would be equal to, 2.0x.2=.4 percent of the current level.

7.02 There is also a short-term role for the MHF as an innovator. In order to initiate these new mortgage instruments the MHF must mobilize the first resources that the banking system invests in them. After four or five years, however, the banking system should be responsible for future

financing of these loans. The MHF in the longer-term should provide only insurance protection against adverse movements of real wage trends, reimbursing the banks which hold the mortgages only when declines in the wage index results in shortfalls. Over the longer term, there should be little or no on-going costs to the GOT of initiating the use of this new kind of financial instrument. However, in the short run, subsidies will definitely occur. The short-run objective should not be the elimination of subsidies, but rather an accurate accounting and budgeting of them.

7.03 As part of its role clarification, the MHF should more closely assess the merits of project development that it has recently begun to support. Land development by government agencies has rarely been successful. Further, it dilutes MHF's already small staff resources. As a practical matter, the record-keeping of resources that the MHF now allocates to infrastructure and related lines of business should be separated from those allocated to mortgage credit. The mortgage credit business should earn a positive financial rate of return that can sustain these investments. The infrastructure expenditures, on the other hand, may earn an even higher economic rate of return than do housing investments. However, it is difficult for them to earn a positive financial rate of return. As a consequence, aggregating these two functions together obscures the performance of the financially sound portion of the MHF functioning.

7.04 As a financial intermediary rather than a housing subsidy program, the MHF should initially attempt to provide assistance to moderate but not low income families. Without the development of a financial system that permits those who can afford to and are willing to pay for housing to do so,

it is very difficult if not impossible to develop effective housing subsidy programs. In the absence of the MHF there is essentially no mortgage credit available in Turkey for the non-wealthy. Hence, the first priority is to establish such a system. Over the longer-term considerable attention should be paid to developing a housing subsidy system that complements the housing finance system. However, this is not a process that can be quickly implemented, and since the provision of finance is a prerequisite for efficient subsidies, the MHF should first move in this direction. The proposed financing strategy would ultimately free substantial resources for housing subsidies for lower-income households, as finance replaces the current transfers to the middle class. Nevertheless, this is not a topic that can be addressed quickly. It has, for example, taken World Bank projects in both Chile and Morocco more than five-years to reach the point where the subsidies for the poor could be rationalized. The issue of improving subsidy measurement and control is worthy of further study.

7.05 With the new lending instrument, the MHF should be able to eliminate construction period subsidies and attempt to shorten the construction period as much as possible. From a strictly technological standpoint this is certainly possible. The Cukurova survey of Gecekondu production (See Appendix II) shows that the primitive production techniques in this sector produces housing in 18 months. The main impediment to the reduction in construction period subsidies is the small loan amounts per unit. Larger loan amounts and a higher interest rate to capitalize deferred payments are needed.

7.06 The MHF's financial services should not be provided to upper-income households. This targeting of its services can best be accomplished if the MHF reduces housing standards of the units it finances to no more than 90 square meters (or lower if possible), and increases the average loan amount. Loans of all larger size housing units (above 100 sq meters) should be accommodated strickly by private sector financial institutions without MHF support of any kind. A reduction in eligible house size and an increase in the loan amount would reduce the need for such large construction period subsidies and allow the MHF to serve more families with the same amount of resources. In the absence of other funding for housing the MHF has performed as well as can be expected. However, now that the banking system is attempting to provide new forms of finance,[1/] particularly for more expensive housing, the MHF should be careful not to compete with the banks.

7.07 The most essential component of the recommendations is that the mortgage instrument used by MHF should maintain the real value of repayments while recognizing the possible volatility of real wages in the Turkish economy. It should also be realistically implemented. The use of very low discount rates on very high mortgage payment-to-income ratios can create the impression that the funds can be provided without subsidy. In the current economic environment this is very unlikely. It is far better to recognize the subsidy at the outset rather than come to a subsequent realization that the MHF needs to cut back sharply or increase its tax revenues.

1/ The new types of finance involve deferred interest, variable rate loans that will only marginally address the tilt problem of high rates of inflation. They would be targeted at upper- income borrowers.

7.08 A realistic inflation index should be used to measure changes in outstanding loan value and a real interest rate of not less than 6 to 8 percent should be used as a discount rate to amortize the loans. The amount by which payments do not maintain the loans' real, inflation-corrected value should be seen as the government contribution and budgeted accordingly. The rest of the Fund's expenses should be treated as those of a financial intermediary and also treated accordingly.

7.09 MHF's financial operations should come under the preview of the appropriate regulatory body and be audited annually. A short-run strength of the MHF was its ability to operate quickly without such accountability. Over the longer term, this strength will become a weakness. A lack of accountability and narrow focusing of the MHF's resources will cause the Fund to discourage, rather than assist, sector development. Again, the establishment of clear financial norms that correct for inflation is not a process that can be implemented quickly. However, without the development of broad standards that seek to accomplish this, it will be difficult to keep the MHF focused on what it can do well.

7.10 One of the most important components of the MHF's financial management practices will be its selection of the indexes it uses to value its assets. The importance of a well-functioning and credible index is difficult to exaggerate and there are clearly a number of of options for both wage and price indexes. Rather than discussing the merits and possible shortcomings of the various options available, we focus here on the objectives that should be used in evaluating various measures.

7.11 For the price index the concern is with consumer prices (rather than the wholesale or construction industry prices). The consumer price index is obviously the most direct measure of the current level of this price. However, it by no means provides an effective measure of expected prices, and is it an ex post measure that can be quite volatile. There are two ways this volatility can be reduced: (i) extending the period over which the index is measured; and (ii) using an assumed rate of graduation in repayments that is the projected inflation rate instead of the actual inflation rate. Of these two approaches the former is clearly preferable. The automaticity of change and insulation of the amount owed from manipulation are important attributes for avoiding difficult-to-measure credit subsidies and their counterpart capital losses for the MHF.

7.12 For wages, ideally the index would correspond to the expected earnings pattern of the borrower. That is, civil servants use one index, and private sector borrowers another. However, in practice this "menu of indexes" approach is almost certainly too complicated to be practical. As a beginning step it would seem to be advisable to use one index, the one that is most commonly applicable to the MHF borrowers.

B. The Macroeconomic Constraints on Implementing the Recommendations

7.13 At the present time the MHF faces similar housing market conditions to those which prompted its creation--a large number of unfinished housing units have applied for loans from the MHF. In fact, the number of unfinished units at present probably exceeds the number that existed in 1984 when the fund was created. Unlike 1984, however, the current macroeconomic

environment is not conducive to government stimulation of the housing sector. In fact, there appear to be very good reasons for slowing down the MHF's short-run disbursement of funds. This important cyclical issue--a large stock of unfinished housing units--should be separated from the long term institution-building concerns that can be addressed in part, by redesign of the mortgage repayment scheme. Some relativly simple ways that the Fund's disbursements could be slowed down while simultaneously conferring beneficial effects on the sector are:

7.14 First, require the completion or near completion of infrastructure before MHF funds are disbursed for housing construction. While this requirement would slow down MHF disbursements because of the lack of local government administration capacity, it would do so by placing the pressure for non-performance on local authorities who have not been as responsive as they could be rather than on the MHF. It would also reduce the cost of providing infrastructure. This last advantage would occur because it is less costly to build infrastructure before housing is constructed rather than after it is constructed, as is often the case with the current program.

7.15 Second, over the near-term the MHF should not increase loan-to-value ratios, but increase the interest rate on construction period loans so that there is no construction period subsidy. This measure would make investments in housing construction much less attractive to the many investors who place downpayments on several housing units in order to be sell appreciating real assets.

7.16 The fact that at least some of the house sales encouraged by this measure might be at "distress" prices would be a concern. However, it would also have two desirable properties. First, it would almost certainly lower the cost of housing to the ultimate beneficiaries who want to buy housing. At present it appears that most of the unfinished units are sold a number of times during the 33 month construction period. This change in regulation would reduce the ability of current owners to sell the capitalized value of the MHF subsidies. Second, it would increase the attractiveness of financial assets relative to what is essentially a parallel, large, growing, and unregulated market in housing co-operative investments. One of the main functions of a formal financial system is to serve as a filter between savers and borrowers of varying risk qualities. The frequent allegations of abuses in the co-operative market suggests that integrating the current investments in the co-operative sector into the formal financial system could improve this filtering process. It could also serve to provide a more household active interest in deposits in the commercial banking system.

C. Action Plan

7.17 Consensus should be sought from the Central Bank, the Treasury, and the Capital Markets Board that constant value mortgages are an appropriate means for the MHF to finance housing. As part of this consensus approval should be sought for commercial banks to issue the new types or mortgages instruments they have been requesting. The use of contracts that adjust payments for inflation has met significant resistance both in Turkey and a number of other countries, both within the housing and financial sectors. Further, the MHF's operations have implications for the operation of

financial, fiscal and wage policy. Hence, it is important for the discussion of MHF policy to include inputs from these affected policy-makers.

7.18 Regulatory changes in repayment methods, loan size and house size eligibility, the length of the savings period prior to approval, the interest rate charges during the construction period, and the choice of index and real interest rate should be made. However, these changes have a cumulative effect and so should be considered simultaneously. The broad objective of these changes should to move the MHF to provide one basic service: the insurance that a real return will be earned regardless of the course of real wages. Fulfillment of this objective almost certainly requires that the MHF shed responsibilities that are unrelated to this function, in particular, real estate development.

7.19 An important constraint on the achievement of the MHF providing only one basic financial service is the basic cost of any financial services. At their minimum sustainable level, the costs of finance are too expensive for many households. However, unless the interest rates paid by borrowers are sufficient to induce greater holdings of financial assets, the borrowings will crowd out other investments, rather than induce more savings in financial assets credit. Consequently, the mortgage credit provided through the MHF's operations cannot be afforded by the lowest income borrowers, and the funds should not be targeted on them. This kind of constraint implies that the very poor are not the immediate targets of MHF services.

7.20 In the near term, the provision of constant value mortgages will require that the MHF continue to mobilize tax revenues. However, the simulations of possible outcomes suggest that the expected subsidy level can be reduced significantly if not completely eliminated even if real wages remain as turbulent as they have been in recent years. A plan should be developed whereby the MHF loans could ultimately be mobilized by deposit instruments rather than tax revenues. Appendix VIII contains a preliminary discussion of various ways these funds could be mobilized.

7.21 The relationship between the provision of finance for housing and the allocation and financing of infrastructure investments will be a problem for some years to come. The de-centralization process and funding of local governments necessary to make these investments is only beginning to take place. Development of the appropriate administrative mechanisms for managing these funds will take a number of years. This administrative weakness will constrain the efficacy of MHF. However, the MHF funds should not be allocated to blunt the costs of these infrastructure problems. Allocating more MHF funds to those localities which perform effectively rather than to those which do not perform can help encourage a more rapid development of more efficient local government expenditure patterns.