POLICY RESEARCH WORKING PAPER 1516

Contractual Savings for Housing

How Suitable Are They for Transitional Economies?

Michael J. Lea
Bertrand Renaud

Problems of developing specialized financial services for housing are acute in socialist economies in transition. Contractual savings for housing (CSH) are often advocated in Central and Eastern European countries as a primary solution. CSH systems were indeed used successfully in Europe for reconstruction after World War II. The issue today is what role CSH can play under very different financial conditions in latecomer countries that want to develop competitive and flexible financial systems capable of successfully integrating with the global financial markets.

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Summary findings

Problems of developing financial services for housing are acute in transitional socialist economies. Lea and Renaud examine contractual savings for housing (CSH), which are often advocated as a primary solution, especially in Central and Eastern European countries. A CSH instrument links a phase of contractual savings remunerated at below-market rate to the promise of a housing loan at a rate also fixed below market at the time the contract is signed. This contract can contain a variety of options.

CSH were used very successfully in Europe after World War II. The issue today is not whether such specialized *instruments* can work. They clearly can under low inflation. The issue is whether CSH *systems* are advisable today in latecomer countries with vastly different financial technology and financial policy environments.

Lea and Renaud focus on two influential CSH systems: the "closed" German *Bauspar* system and the "open" French *épargne-logement*. In a "closed" CSH system, access to a housing loan is based on queuing: a loan can be made only if funds are available in the specialist institution. In an "open" system, the saver can legally call his or her loan at contract maturity, regardless of the liquidity conditions in the CSH system.

From the perspective of households, CSH contracts facilitate the accumulation of equity and offer the prospect of a low-interest loan. They promote savings discipline and provide a concrete goal that many households find important. But CSH instruments leave the objective of providing a primary loan unmet. In addition, even moderate inflation quickly leads to very low loan-to-value ratios for CSH loans and a large financing gap for housing purchases.

From the perspective of financial institutions, CSH can help overcome the severe information asymmetries they face in transitional socialist economies, where there are no retail financial markets, no credit bureaus, and problematic income reporting. CSH are very effective in screening, monitoring, and establishing the reputation of steady savers as future borrowers, and they are good at lowering credit risks. With their saving periods of four to five years, CSH also help bridge the gap between long-term loans and short-term deposits. Finally, CSH can be an important commercial tool for developing cross-lending activities. But CSH can be risky. When the interest rate on outstanding contracts is low compared with current market rates, holders of mature contracts will want to call their loans. And new savers will be reluctant to sign on at very low contract rates. Eliminating this liquidity risk with a "closed" CSH system erodes the attractiveness of CSH.

From the perspective of government, a CSH instrument can work in a noninflationary environment, yet a CSH system would have no justification in fully developed and competitive financial markets today. CSH instruments can play a useful but not a dominant role in housing finance. After stabilization, they can provide "additionality," overcome information constraints on financial contracts, and contribute to higher financial savings rates. CSH instruments are best used to finance home improvements. They can also be used as part of a social policy to reach targeted social groups.

This paper — a product of the Financial Sector Development Department — is part of a larger effort in the department to develop sustainable housing finance in transition economies. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Rozzy Garner, room G8-010, telephone 202-473-7670, fax 202-522-3198, Internet address rgarner@worldbank.org (57 pages). September 1995.

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ABSTRACT

Problems of developing specialized financial services for housing are acute in transition socialist economies (TSE). Some constraints derive from the incomplete and imperfect privatization of the real estate sector. Others reflect the fragmented and undeveloped financial system. This paper examines a financial instrument, contractual savings for housing (CSH), that is often advocated as a major solution, but usually without consideration of its impact on the emergence of a competitive housing finance system and on overall financial development. Interest in CSH is high in Central and Eastern European countries. Legislation has already been passed in some of them (Czech Republic and Slovakia) and is under serious discussion in others (such as Poland).

A CSH instrument is a dedicated loan-linked form of saving. It links a phase of contractual savings remunerated below market to the promise of a housing loan at a rate also fixed below market at the time of contract signature. The contract can contain a variety of incentives and options. CSH are advocated on the basis of their positive historical record in continental Europe. They were originally designed decades ago to generate long-term funds to be specifically channeled into the housing sector at a time when long-term finance was not available and reconstruction was a national priority. In environments where savings were very low, CSH encouraged household savings with the help of government incentives. They have also been implemented in developing countries as well, often with very mixed results because financial conditions for their success were either not fully understood, or not met. The issue is not whether such specialized instruments can work successfully. They clearly can. The issue is whether CSH systems remain advisable today to latecomer countries that want to develop competitive and flexible financial systems capable of integrating successfully with the global financial markets. It will take four to five years for a new CSH system to begin to have an impact. Would time, scarce financial skills and capital be more productively used at developing alternative solutions to the problems CSH were solving in decades past?

This evaluation focuses on two very large and influential CSH systems: the "closed" German *Bauspar* system and the "open" French *épargne-logement.* In a "closed" CSH system access to the housing loan is a based on queuing; it can be made only if funds are available within the specialist institution. In an "open" system, the saver can legally call its loan at contract maturity, irrespective of prevailing liquidity conditions in the CSH system. The analysis examines these two types of CSH from the three very distinct perspectives of households, financial institutions, and financial authorities responsible for the development of the entire financial sector.

- From a *household perspective*, CSH contracts facilitate the accumulation of equity, and offer the prospect of a low-interest loan. They establish a saving discipline and provide a concrete goal that many households find important. However, in inflationary TSEs the guaranty of a loan will not be not enough to achieve housing ownership. CSH contracts are designed to operate in low inflation and stable real interest rates environments. Inflation levels above 15% sharply erode the attractiveness of a CSH from a relative cost or affordability perspective: a widening financing gap develops between the CSH financing available and the rapidly rising cost of a housing unit. Conceptually, CSH instruments can be designed to operate in inflationary environments but such a result is achieved at the price of very limited usefulness to households. Even under low inflation, CSH instruments are designed to built up initial equity and to provide a second mortgage loan, leaving the provision of a primary loan unmet. The paper shows that even moderate inflation quickly leads to very low loan-to-value ratios for CSH loans. The widening gap must be financed with expensive -- or non-existent -- market rate mortgage loans.

- F*inancial institutions* face severe information asymmetries in transition economies where there are no retail financial markets, nor any form of credit bureaus, and income reporting is problematic. CSH are very effective for screening, monitoring and establishing the reputation of steady savers as future borrowers, and CSH contracts are good at lowering credit risks. Their screening efficacy is high. For instance, in France, delinquency and default rates for CSH loans are 10 times lower than for other

housing loans (for which credit risks are already low). CSH with their 4 to 5 years saving periods also reduce the duration gap between very long term mortgage loans and very short-term deposit liabilities. From a commercial point of view, CSH can be an important tool to stabilize a clientele and develop cross lending for a variety of consumer, microenterprise and small business services. However, CSH can be risky for financial institutions depending on the options embedded in the contract. When the interest rate level on outstanding contracts is sharply lower than current market rates, holders of mature contracts will want to call their loans. On the other hand, new savers will be reluctant to sign on at very low contract rates when alternative saving vehicles exist. As the CSH circuit itself matures and the growth of new contracts levels off, an institution may be forced to ration CSH loans through increased waiting periods or turn to expensive market rate sources of funds. Eliminating liquidity risk through queues with a "closed" CSH like the German *Bauspar*, erodes the attractiveness of a CSH.

- From a *government perspective*, encouraging CSH systems does not *per se* address the shortage of long-term mortgage lending because a CSH contract is not designed to be the primary source of long-term mortgage finance. Under pressure to mobilize larger volumes of long-term funds and raise the aggregate household savings rate, governments may agree to "open" CSH contract designs with overly generous options in the takeoff phase of the CSH system such as untargeted interest rate subsidies and tax benefits. The most important lesson of experience with such "open" contracts is that they can be very successful in mobilizing funds, but at the cost of creating large contingent liabilities for the government at the worst time in financial cycles. Control of such risks may then lead financial authorities to perpetuate various forms of directed credits. With the continued segregation of housing finance circuits from the rest of the financial system further come inefficiencies that such compartimentalization usually entail.

A CSH instrument can work successfully in a non-inflationary environment, yet a CSH system would have no justification in fully developed and competitive financial markets today. The more a transition economy is advanced economically, stable financially, and rapidly converging with international financial markets, the least likely is a CSH system to make a difference. Before introducing any CSH, government policy makers should identify and thoroughly investigate: (a) the general housing finance system that they intend to promote and how it will interact with the overall financial system, and (b) the financial costs and benefits of every option embedded in the proposed contract. A danger with promoting CSH today is that they may be distracting attention away from the steps needed for the development of a complete housing finance system. Instead of promoting sectorally restricted CSH instruments, the financial priority is to develop broadly-based contractual savings such as pension funds and life insurance systems which are needed in any case. A frequent financial policy gap in TSEs which is highlighted by promoters of CSHs is the lack of coherent policies towards savings markets and retail finance (including credit bureaus). Instead of promoting special financial circuits that they hope to control, line ministries responsible for housing and construction should work on removing the legal and regulatory obstacles to market-based finance that affect credit risk and the quality of real estate collateral. In many semi-reformed economies, the legacy of former urban planning and approval systems significantly increase investment uncertainty and the price of housing. Low interest special circuits cannot be used to solve affordability problems originating from inferior urban policies and processes without imposing large costs to the national economy.

To summarize, CSH instruments can play a useful but not dominant role. After stabilization, they can provide "additionality", overcome information problems afflicting financial contracts, and contribute to higher financial savings rates. CSH instruments are best used to finance home improvements. They can also be used to reach targeted social groups not served by the banking system and needing to establish their credit worthiness. Such CSH use is superior to politically exposed, administered public programs in reaching such groups because a CSH provides more consumer choice, implies self-selection and encourages savings discipline. The potential impact of every option embedded in a CSH contract, especially loan multipliers and call rights needs to be controlled. This is why "closed" are preferable to "open" contracts.

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I. INTRODUCTION

1.1 Housing as One of the Four Big Privatizations

1. The privatization and revival of housing and real estate markets in Eastern Europe and the former Soviet Union has the potential to make a major contribution to their overall economic recovery and restructuring. These countries are privatizing large-scale enterprises and industrial kombinats; medium and small-scale enterprises; agriculture; and, housing. Housing assets alone represent a fifth to a fourth of all the assets to be privatized. If non-residential assets are added, the share of the real estate sector in national assets is even larger. Given the high level of urbanization of many of these countries, the dominant issue is often less the need for large net additions of new housing to the existing stock than the possibility to trade units freely and efficiently in order to restructure the sector. The prospect for using real estate as loan collateral by emerging small and medium businesses is also an important feature of market revival. However, a major constraint to active trading and the development of broadly-based real estate markets is the absence of long-term housing finance and related banking services. This paper does not address the full housing finance agenda. Rather, it evaluates a specific type of financial instrument which has often been proposed to fund long-term housing loans: ***contract savings for housing***. Our central concern is the long-term impact of such instruments on the development of the fledgling financial markets emerging out of the rubble of the old financing systems of central planning, and in particular on the development of financial savings.

1.2 Absence of Long-term Finance and Proposals for CSH Systems

2. Contract Savings for Housing ("CSH") systems have been advocated as a solution to the problems of insufficient long-term savings and funding for housing in Transitional Socialist Economies (TSEs).[1] These systems originated in Germany after World War I (the *Bauspar* system) and were revived in that country and in Austria before developing in France (*L'Épargne Logement*) after the second World War as mechanisms to address the financing needs of the housing sector. The current attractiveness of CSH to reformers stems in part from parallels that they draw between the economic, financial and housing market conditions that existed in Western Europe after the War and those that prevail today in the TSEs: an absence of long-term savings, a perceived housing shortage, affordability problems as evidenced by extremely high price-to-income ratios, high and volatile inflation, reduced real incomes, and the absence of private financial services for housing and the household sector. CSH programs have recently been started in the Czech Republic and Slovakia. In addition they have been proposed in Hungary, Poland and Russia.

3. CSH contract instruments used in Continental Europe derive from the early U.K. experiences with mutual forms of housing finance. They involve a contract on the part of a household to save an agreed amount over a prescribed period in return for a commitment on the part of a financial institution to provide a loan, at pre-specified terms, for the purchase or renovation of owner-occupied housing. CSH are characterized by fixed, below-market rates on savings and subsequent loans. By design, CSH attempt to insulate households from financial market volatility. An important part of the appeal of these systems lies in the promise of eventual loan availability at a predetermined rate of interest.

4. CSH systems have had a very significant degree of success in post-War Europe. They addressed two of the most vexing issues confronting TSEs today: lack of adequate information on borrowers and on properties to assess and manage credit risk, and lack of long-term funding for housing. By saving regularly over an extended period of time, a household evidences financial responsibility which may signal reduced credit risk. The savings form a pool of long-term funds for downpayments and long term loans.

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[1] It is important not to confuse the loan-linked "contract savings for housing" which are the focus of this paper with the general category of "contractual savings" encountered in discussions of financial sector development. "Contractual savings" ordinarily refer to pension funds and life insurance. In modern financial systems, "contractual savings" usually are a major source of market-based long-term finance.

5. The question treated in this paper is whether these systems are likely to meaningfully solve the housing finance shortage in TSEs today. Comparing with the post-War European environment, doubts arise for two reasons. The most direct is the presence of high and volatile rates of inflation which make CSH unattractive to households and risky for financial institutions. On a more general level, the character of financial markets is vastly different today than it was when the successful European CSH systems were created. The revolution in information technology, financial instrument innovation, financial deregulation, the opening of current and capital accounts and the globalization of capital markets have led to a decline in special circuits of finance for housing in many of the industrial countries with which TSE economies interact and aim to converge. TSE countries can and should learn from this experience in creating their financial systems. The special circuits on which CSH systems are built are very congenial to the behavioral legacy of the administrative command systems of TSEs, but where do they fit in the development of broad-based contractual savings systems, competitive long-term finance, and modern financial market development?

1.3 Three Perspectives for the Evaluation of CSH Systems

6. Traditional analyses of CSH instruments have been mostly technical giving almost exclusive attention to the mathematical features of an individual contract. Very little attention has been given to the relevance of these financial instruments and CSH systems to financial development nor to their systemic benefits and costs.[2] This paper analyzes CSH systems from the perspective of long-term financial sector development. Are CSH likely to be successful in mobilizing long term savings for housing in TSEs? Are CSH adaptable to a changing macroeconomic and financial market environment? What risks do CSH present, both to the institutions that offer them and a government that supports them? Should housing finance be provided through special circuits or should transition economies be encouraged to rely from the start on the broader financial markets and capital markets given the weak state of their financial systems, and problems faced in financing other sectors of the economy?

7. CSH systems have been implemented in a number of developed and developing countries over the last two decades.[3] However, a full inventory of such

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2 A notable exception is Börsch-Supan and Stahl [1991].

3 In addition to France and Germany, CSH and various forms of loan-linked deposits are in use or have been proposed in Austria, Spain, Tunisia, Morocco, Chile, Indonesia, India, Thailand. The specific instruments selected have been offshoots of either the French or German designs, which themselves built

experiences is not necessary. The critical features of CSH and their dynamic interaction with the financial system can be effectively understood through a study of the two largest CSH systems in existence today: those of Germany and France. These two systems are analyzed from three different perspectives: those of households, lending institutions and national governments. The risks and returns to each participant in such systems of loan-linked deposit contracts differ, and before encouraging the adoption of CSH instruments the following questions should be answered:

- Why would a household enter into a CSH? To what types of borrowers and under what financial market conditions is a CSH attractive?
- Why would a lending institution offer a CSH? Are the risks manageable in different macroeconomic environments?
- How do CSH system contribute to the development of financial markets and the housing sector? What difficulties do financial authorities face in regulating the system?

8. The organization of the paper follow from the questions just raised. First we present the main characteristics of the transition economies and the factors affecting the development of housing finance: macroeconomic conditions; the extent and nature of housing privatization as it affects the demand for mortgage finance; and the difficult conditions of their financial systems. Second we present the factors affecting the design of CSH instruments and compare the features of the "**closed**" German CSH systems with those of the "**open**" French CSH system.[4] Third, we evaluate these two types of systems from the three viewpoints of households, financial institutions, and governments. Finally, we evaluate the suitability of CSH instruments and systems to transition economies.

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upon early British forms of mutual savings. For a paper retracing the conceptual link between mutual credit (*crédit différé*) and the French CSH system of *épargne-logement*, see Thomas (1994).

[4] A "closed" CSH system is defined as one which is strictly of a mutual nature between savings contracted and loans made. An "open" system is defined as one where the tight link between saving phase and borrowing phase is loosened by external incentives and options provided by the government in order to mobilize funds at an accelerated pace.

II. MAIN FEATURES OF TRANSITION ECONOMIES AFFECTING HOUSING FINANCE

9. An effective evaluation of CSH instruments requires a characterization of the financial environment in which they are expected to operate. There are very significant differences between the post-war economies of Western Europe and current conditions in TSE countries. Their atrophied banking systems designed for central planning are undergoing a large scale overhaul, the macroeconomic environment often remains unstable, the extent of privatization of their housing systems varies considerably and follows different paths. Most of them have comparatively underdeveloped financial systems, especially if compared with post-War Western Europe. The introduction of CSH systems therefore raises fresh questions.

2.1 Caught Between Plan and Market

10. In the long catalogue of TSE economic problems, the two main headings are privatization and banking sector reform. In many ways, rapid privatization in the real sector is the most important step, both by itself and as a critical ingredient of banking reform. However, privatization will not succeed without reform of the banking system. The major problems facing TSE banks are a lack of capital and a lack of lending experience. Under central planning, banks were not really banks. They were accounting and auditing arms of the administrative-command system, functioning as disbursing agents. Banks did not make independent lending decisions, they did not face any risk, and the soft-budget constraint enjoyed by production agents governed their operations. Even after new sectoral banks were carved out of the old monobank structure, the system has been slow to change. Former state banks have been slow to respond to credit demand, particularly from newly formed companies. When credit has been available, it has been at very high real interest rates. The banks have charged very high margins reflecting in part their questionable balance sheets often burdened by defaulted loans from current or newly privatized state enterprises. They also arise from very high operating costs and limited competition.

11. The financing problems faced in the housing sector are particularly severe. Under central planning, most of the urban housing stock was under public ownership and most production was carried out by state organizations. Households played a very

passive role. Their contributions were marginal as most of the funding for new housing and operations and maintenance came directly from central and local budgets or indirectly through state enterprises. The minimal contribution of households was made clear by extremely low rents. Today, recreating housing and real estate markets has a very high priority. Their revival will have major sectoral and aggregate benefits, social as well as economic.[5] However, even if the existing housing stock were privatized swiftly, a broad-based revival of the sector would remain severely constrained by the absence of financial services. Mortgage lending is often a very new concept. In many countries it is barely operational. On the funding side, market-based long-term finance is almost universally missing and vehicles for voluntary mobilization do not exist. Public expectations and the banking culture are still colored by central planning when funds were funneled through the state or lent at subsidized rates to enterprises or cooperatives.

12. There are three main reasons why market-based long-term finance for housing is not yet available in the TSEs. First, inflation has been high and remains volatile in most of these countries, discouraging long term savings. Therefore banks lack long-term funding sources to finance a long-term durable good such as housing. Second, due to the inherited legal and institutional environment, owner-occupied housing is not viewed as a very good collateral for lending. Foreclosure when feasible is usually long and costly. In some countries, lenders cannot obtain possession of a unit from a defaulted borrowers without provision of substitute housing (as in the case of rental eviction) and then only after a long and uncertain foreclosure process. Third, restructuring old banks as well as emerging new banks are relatively illiquid. They concentrate on short term trade and foreign currency services which are profitable and have a short time horizon. The banks prefer to invest excess liquidity in government securities which offer superior risk adjusted returns relative to consumer and housing loans.

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5 See Renaud, 1992 "The Housing System of the Former Soviet Union: Why do the Soviets Need Housing Markets?", *Housing Policy Debate*, Volume 3, Issue, Fall 1992.

2.2 TSE Macroeconomic Environments

13. The macro policies pursued during the transition interact with the development of long-term finance. All TSEs have experienced significant inflation reflecting the sharp initial price adjustments which have usually followed the liberalization of prices and creation of private markets.[6] The present distinction between high inflation and low inflation in the case of most TSEs is still one between extreme inflation in excess of 100 percent per year and "moderate" inflation with persistent annual rates of 15 to 30 percent. Achieving consistent single-digit levels of annual inflation is proving difficult to most TSE governments because this requires profound fiscal and financial reforms together with credible macroeconomic policies.[7] The pattern of inflation observed in Central and Eastern Europe over the last five years has been as follows (Table 1):

Table 1

TSE Annual GDP Deflators, 1989-93 (percent)

Country	1989	1990	1991	1992	1993 (est.)
Poland	298.5	480.1	50.9	36.5	34.0
Hungary	18.7	25.7	23.2	17.7	18.7
CSFR	2.4	8.6	45.7	8.5	19.8
Romania	-1.0	13.6	194.4	214.7	239.4
Bulgaria	6.7	26.2	227.0	58.4	41.3

Source: World Bank data

14 There is no escaping the fact that the real estate sector , including housing, is one of the sectors of the economy most sensitive to monetary policy, inflation and interest rate volatility. If governments do not succeed in achieving conditions favorable

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6 See Leszek Balcerowicz and Alan Gelb "Macropolicies in Transition to a Market Economy: A Three-Year Perspective", paper presented at the Annual World Bank Conference on Development Economics, Washington D.C. April 1994.

7 For a discussion of the technical difficulties inherent in stopping inflation quickly, see Rudiger Dornbusch and Stanley Fisher, "Moderate Inflation", *The World Bank Economic Review*, Vol. 7, January 1993, No.1. Some TSE economies like Estonia have successfully switched to a currency board system of monetary management and broken inflationary expectations. Domestic interest rates will then tend to be align themselves on those of the currency of reference, in this case the Deutsch Mark.

to the growth of market-based long-term finance, they run the risk of being drawn into direct interventions and making housing finance a *de facto* annex of monetary and fiscal policy. The resulting directed credit policies can usually go two ways: they may mean deliberate credit rationing of the sector as in Japan and Korea during their peak period of urbanization, or preferred treatment as in the Nordic countries and France after World War II.

Table 2

Pre-Reform Urban Housing Ownership and Housing Contraction in TSEs

Country	Private Ownership 1988-89	Fall in National Housing Output (1000 units)
Poland	excl. coop: 23.5% incl. coop: 60.2%	1980: 217.1 1991: 136.8
Hungary	Budapest: 48.6% other cities: 71.1%	1980: 89.1 1991: 33.2
CSFR	excl. coop: 46.1% incl. coop: 65.0%	1980: 69.3 1991: 62.5
Bulgaria	77.5%	1980: 128.9 1991: 19.4
Estonia	18.0%	1987: 14.0 1991: 5.2
Latvia	15.0%	1987: 23.0 1990: 13.6
Lithuania	21.0%	1987: 32.1 1990: 23.1
Russia	16.0%	1987: 1324 1992: 691

Source: World Bank missions and country national statistics

2.3 Common Features of TSE Housing Markets

15. The level demand for mortgage finance is directly related to the purchase of new or existing units and thus to the level of privatization of the housing stock. Some countries have privatized much faster than others. Initial conditions also differed markedly. At the beginning of the transition in 1989, private ownership of housing

varied sharply from country to country, and between the capital region and the rest of the country:

16. There is direct functional link between the restructuring of banking systems and that of the sector they are financing. Statistics comparable across countries are not yet available on the degree and speed of privatization of TSE housing stocks.[8] For the most part, the ownership of the non-owner-occupied stock has been transferred from national to municipal governments. These entities have not been able to privatize a significant portion of the stock due to the presence of rent controls and deeply below market rents. In such situations, residents have been reluctant to give up the benefits of pre-existing housing subsidy for the perceived vagaries of ownership with higher operating costs. As a consequence, housing has been a significant drain on the finance of municipal governments. Another characteristic of TSE housing markets is the impaired efficiency of residential real estate as loan collateral. Under some post-socialist housing codes, if a lender wished to foreclose on a defaulted loan and had taken the property in lieu of repayment, it would have had to provide substitute housing for the occupant. In all cases foreclosure is costly, lengthy and uncertain. This collateral gap is very significant because it amplifies the impact of the lack of credit history and meaningful borrower income data in these countries.

17. As Table 2 shows, housing construction output has plummeted from pre-transition levels in all TSE countries. The collapse of output is linked to abrupt cutbacks in the financing of public production during the stabilization of the economy. It is not clear at all, however, that restoring annual output to its former levels is a matter of national or even sectoral priority because the distortions caused by rent control mask the true demand-supply balance in these countries. However, this collapse of output concerns construction officials and has led to many proposals for revitalizing the sector.

18. The level of demand for housing in TSEs is difficult to ascertain, in part because realistic prices have yet to develop. Housing market prices are determined at the margin by the minority of households now enjoying market salaries. However, comparing these prices to the low salaries inherited from the planning era for the most numerous middle-income population creates the perception of extreme unaffordability.

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[8] Direct comparisons of private ownership levels in TSE with Western Europe can be misleading Apartment units may have been privatized without clarification of the ownership of the land on which buildings rest, or condominium laws to allocate shares of public spaces within the building. Inadequate property information then remains a barrier to housing finance and/or raises its cost.

Not until an active resale market develops based on the average income and purchasing power of households can the actual level of effective demand be estimated.[9]

2.4 TSE Financial Systems

19. TSE financial systems are characterized by a lack of sound financial contracts during the early stages of their transition to market economies. On the asset side of the household balance sheet there is a dearth of formal financial sector investment alternatives.[10] On the liability side, there is a lack of credit available through the banking system. The primary problem is the lack of long term funds. Macroeconomic instability exacerbates household liquidity preference, reducing savings held in banking institutions. Households also often mistrust such institutions given their recent history of state control, and still limited interest in consumer services. Broadly-based contractual savings vehicles (e.g., pension and insurance plans) either do not exist or are in the early stages of development. The lack of long-term funds limits the potential of banking institutions to offer credit for housing, particularly at terms affordable to most households. Uncertainty over the quality of their pre-transition loan portfolios and their ability to access collateral in the event of loan default also inhibits bank lending and contributes to high real interest rates. Table 3 summarizes TSE financial sector characteristics.

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9 In retrospect, rapid privatization of the housing stock for free or at low cost was one of the best ways to reconstitute market wages by transferring back to households with low socialist wages a very large housing asset. Such privatization had the additional benefit of providing a degree of protection against inflation and the erosion of purchasing power. Broad based privatization, followed by trading of existing unit can be expected to lower housing price-to-income ratios to realistic levels. Early PIR values are totally unrepresentative for affordability analyses and other policy uses. They are the ratio of new housing prices for the highest income groups who enjoy market wages to the low socialist wages of the average population further depressed because satbilization policies entailed a decline in real wages.

10 Given the way housing was provided by the state for very large segments of the population, one does not yet observe in TSEs the very large impact that housing has on household sector balance-sheets in market economies where it is the dominant asset. Privatization, and the revaluation of formerly depressed real estate assets are changing the situation fast, especially in the largest cities.

Table 3
TSE Financial Sector Characteristics

Entities	Characteristics
Households	Lack of savings options (esp. long-term contractual) Lack of borrowing options; only short loan terms High real borrowing rates Extreme liquidity preference
Financial Institutions	Illiquid Lack of long term funds Questionable loan quality, moral hazard Lack of risk management tools and procedures High costs & spreads Need to recapitalize Not fully competitive market structure
Government	Need to mobilize private savings Pressures to subsidize credit and maintain output Desire to encourage capital market development Large budget deficits (social entitlements, state enterprise sector)

20. An example of the maturity mismatch of a TSE banking system can be seen by examining the aggregate balance sheet of the banking sector of Slovakia (Table 3). As of June 1993, only 3.5 percent of banking system deposits were 4 years or longer in maturity and only 28.3 percent were one year or longer in maturity.[11] In contrast, 42 percent of loans were in excess of 4 years. Similar conditions prevail in most TSEs . The higher recent inflation experience has been, the more pronounced the maturity mismatch of banking sector balance-sheets.

[11] Note that the average lending rate declines by term reflecting the legacy of subsidized loans originated prior to liberalization.

Table 4

Structure of Bank Deposits and Credits by Sector
Slovak Republic, June 1993

(Slovak Crowns in Billions)

Deposits	**Short Term (< 1 year)**	**Medium Term (1-4 years)**	**Long Term (> 4 years)**	**Total**
Average Deposit Rate	10.7	13.0	13.0	
Enterprises	26,489	245	319	27,059
Financial Institutions	2,342	13,068	0	15,410
Households	69,369	31,116	6,198	106,683
Private Sector	19,198	990	1	20,189
Other	17,020	1,319	0	18,340
Total	134,427	46,738	6,515	187,681
Credits				
Average Loan Rate	18.2	15.8	9.8	
Enterprises	62,816	18,883	49,560	131,260
Financial Institutions	0	15	0	15
Households	1,375	7,712	19,945	29,032
Private Sector	27,994	21,131	33,372	82,497
Other	594	1,133	1,883	3,611
Total	92,779	48,874	104,760	246,417

Source: National Bank of Slovakia

2.5 Gaps in TSE Financial Systems

21. There are a variety of gaps in the institutional fabric of TSE financial systems. These gaps include:

- *Lack of effective demand for mortgage finance from households.* There is only limited experience with direct, long-term lending to households. The only "retail banking" institution in most socialist economies was the national savings bank which mobilized resources from the surplus sector, i.e. the households, and passed

them on to the central bank for allocation among specialized banks serving key sectors such as industry, agriculture and construction (for public works and industrial facilities). Only a very small proportion of deposits were for individual loans. Where households were concerned, group lending to state controlled cooperatives was preferred. As a result, the public is not well educated about the benefits of mortgage loans and very reluctant to incur debt. There is an even greater reluctance to consider loans at variable rates.

- *Lack of long term savings vehicles in the financial system.* The accumulation of long term savings was not really encouraged by the socialist system. Although private pension funds and life insurance funds exist, governments are often concerned with large unfunded pension liabilities. Moreover, the state institutions are funding other public sector liabilities. Dependence on central bank discount facilities to fund housing cannot be a viable solution as it would fuel inflationary pressures and instability and effectively preclude the emergence of long-term housing finance itself.

- *Lack of lending experience and weak credit management skills.* These banks are the only ones to have extensive retail networks from the days when they were monopoly collectors of household deposits under central planning. They did very little or no retail lending since their main role was to finance the state plan. In some countries like Poland, the state savings bank still maintains a monopolistic dominance with 75 percent of all household deposits and 50 percent of the deposits of the banking system. Many of the state banks labor under the burden of large portfolios of under water socialist loans. Through inexperience and weak management, new forays into commercial lending have led to a new crop of non-performing loans. Other types of state banks have few branches and obtain most of their funds from the central bank, interbank loans from the savings bank, and more rarely the state pension and insurance plans. Too often, their best staff are preoccupied with restructuring old debt and solving the insolvency problems of new bad debts caused by their traditional borrowers.

- *Lack of servicing infrastructure and perceived political risk of mortgage lending.* Emerging new banks are only serving emerging private enterprises. They do not wish to be involved in retail mortgage lending which they perceive as less profitable and administratively more costly than repeated lending to business firms.

These new banks are often quite small and view mortgage lending as an activity unlikely to develop scale economies in the near term. The entire banking sector shies away from mortgage lending because of the concern that national parliaments view housing as a "social sector" to which "low cost funds" should be allocated at preferential rates below markets. This is not an unreasonable fear when access to home ownership at market prices and without subsidized credit is impossible to a very broad, middle class section of the population in countries.

2.5 Why The Current Interest in CSH Systems?

22. CSH programs aim to address the lack of long-term finance in a way that can meet the interests of households, financial institutions and governments. CSH provide a long-term savings option for households made attractive by linking the accumulation of savings (for a downpayment) to the availability of a loan in the future. The promise of a loan at a predetermined fixed rate of interest is appealing to households in a volatile financial market environment; particularly if the rate is below market, thereby enhancing affordability. Through CSH, lending institutions seek to attract the long term funds necessary to make housing loans to their growing client base. The requirement to maintain funds on account for a minimum period of time and the incentive to make regular deposits built into most CSH systems may be seen by lenders as providing the necessary liquidity and long-term funding to support long-term, amortizing housing loans that are affordable to their borrowers. Governments see CSH as a means to stimulate the mobilization of private savings to finance activities which have traditionally been provided by the state.[12] They may also see CSH as a relatively low risk and low cost means of providing housing credit particularly to low and middle income households. Governments may also view CSH as a means to stimulate a depressed, labor-intensive sector with an output that has fallen to a third or less of previous levels and to encourage individual ownership and better maintenance of the existing housing stock.

23. CSH play an important signaling role and can be viewed as a remedy to the lack of reliable information on borrowers for long term lending. The lack of lending experience in TSE countries means that borrowers have no credit histories. Income

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12 Barely emerging from central planning, governments also may seek to direct credit to certain activities such as export industries in order to "jump start" the recovery process. CSH may be seen as a way of finance housing demand outside of the banking system for countries with this objective. Among

verification is notoriously difficult and misreporting pervasive for both technical (deficient information systems for the gray and the new economy) and political reasons (deep aversion to the intrusion of institutions into private household matters). CSH allow households to establish a financial record through successful completion of a savings contract. Compared with short-term trade finance, mortgage loan origination represents a very infrequent interaction between a bank and a given housing borrower. The interactions between the bank and savers which are triggered by a CSH prior to borrowing therefore remedy the severe information gap which does not exist when businesses engage in repeated short-term trade finance. The absence of property markets also means that mechanisms to establish and monitor collateral value are also non-existent or just emerging, particularly in the trading of existing property. The prescreening inherent in the savings process together with relatively low loan-to-value ratios can compensate for uncertainties regarding collateral access and valuation in the housing finance process.

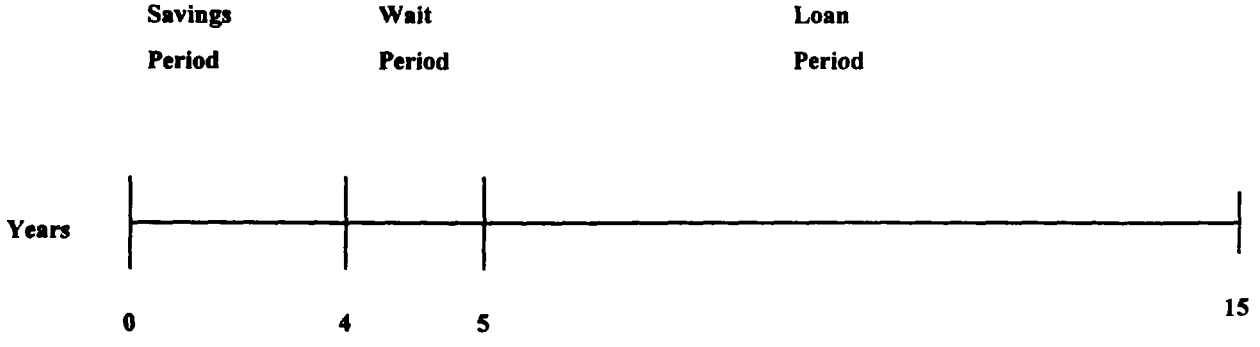
III. BASIC FEATURES OF CONTRACT SAVINGS FOR HOUSING

3.1 Basic Structure of a CSH

24. In its simplest form, a CSH involves an agreement between a household and a financial institution regarding the granting of a loan at a future date dependent on successful fulfillment of a savings contract. The household agrees to save either a prespecified total or a certain minimum amount each year. At the end of the savings period, the household becomes eligible for a loan the amount of which is dependent on the amount saved.

25. There are typically three distinct phases in the contract life (Figure 1): the savings period leading up to qualification, the wait period after qualification until a loan is granted and the loan period. The actual time frames vary depending on the system and/or contract chosen.

Figure 1: CSH Phases



The loan maturity of 15 years for the CSH loan presented in Figure 1 is a maximum. Typical CSH loans are usually second loans of shorter maturity than typical market based main mortgage loans. In case of loans for renovation of existing housing units, loans are even shorter. The average maturity is closer to 10 years.

3.2 Two Dominant Models of CSH

26. Although there are many possible CSH designs, two dominant models exist; the French *Epargne-Logement* and the German *Bauspar*. These two models differ substantially in their basic structure and options as shown in Table 1. This table provides general descriptions. In Germany, individual institutions may offer variants on the basic plans. For that country descriptions refer to programs extant in 1991.[13] The French description applies to the more popular *Plan d'épargne-logement* or PEL.[14]

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13 For a recent consumer review of Bauspar contracts, including ratings and a ranking of Bausparkassen see "Bausparen" in *FINANZtest*, May 1994, pp. 14-28. This review is published by TEST Stiftung a private, non-profit consumer foundation.

14 For more detail in English see Diamond and Lea [1992b]. The full French reference is *L'Epargne-Logement*, Association Française des Banques, 1987 and regular AFB notices on laws and decrees modifying contract rules thereafter.

Table 1:

CONTRACTS SAVINGS FOR HOUSING COMPARED:
FRANCE and GERMANY.

FEATURES	Epargne-Logement (PEL) (France)	Bauspar (Germany)
Provider	Commercial and Savings Banks	Specialized institution
1. SAVINGS PHASE		
Initial Savings Deposit	Small minimum	No minimum
Minimum Annual Savings	Yes. Early deposits are rewarded	No, but preference will be given to regular savers
Minimum Total Savings	Initial + annual + interest	Preset by saver in contract
Maximum Savings Amount	Yes	No
Savings Interest Rate	Competitive after-tax yield	Below market after-tax yield
Savings Liquidity	Yes. Moreover contract transferable to relative.	No. Therefore existence of "interim" loans.
Government Incentives: 1. tax-free yield? 2. Interest subsidy?	1. Full interest tax free 2. State interest subsidy ("interest premium") based on interest paid by the bank. Ceiling of FF10,000.	1. Full interest tax-free 2. Income targeted interest subsidy, but only for housing loan.
2. MINIMUM WAITING PERIOD	4 years (except 1981-1992: 5 years) Some contract benefits extended on request. 10 year-limit since 1992.	2 years
3. LOAN PHASE		
Date of Loan Availability	Right to loan immediately at the end of the savings phase, with option to call loan extensible up to 10 years.	After waiting period of uncertain duration
Maximum Loan Amount	Loan such that interest paid on loan equals 2.5 times interest earned in savings. Ceiling of FF400,000.	Multiple of contracted savings amount (1 -1.5 times)

Loan Term	**2 to 15 years at borrower's option, but constrained by interest rules.**	**6-15 years at borrower's option; rules give preference to shorter term loans**
Loan Rate	**Contract deposit rate paid by bank plus regulated servicing fee.**	**Minimum spread of 2% over saving rate.**
Loan Payment	**Level**	**Level**
Loan Servicing fee	**1.70% of outstanding principal**	**2% spread**
4. CONTRACT OPTIONS		
On State Interest Subsidy	**State interest subsidy have ranged from 4/9 to 2/7 of bank interest on savings available after contract maturity *with or without loan.***	**State subsidy is part of the contract**
On Transfer of Rights	**Mature contract benefits can be transferred to relative to improve subsidy + maturity of a loan.**	**Limited transfer**
On Uses of the Loan	**purchase of new unit, existing unit, new secondary residence, rehabilitation, energy retrofit, housing REIT (since 1993).**	**Purchase, construction, rehabilitation.**
On Timing of Loan	**Once contract matures, up to saver responding to market conditions. Right to a loan can be extended to 10 years.**	**Up to lender, but actually according to prespecified queuing rules.**
On Tax Free Interest	**Bank- paid contract interest remains tax free beyond the 10 year limit.**	**Not applicable**

3.3 German "Closed" System and Strategy Behind the French "Open" System

27. The characteristics and behavior of the German and the French CSH systems differ. The most important difference is that we define the German system as "closed" and the French system as "open". By closed we mean that the German system follows a strict principle of mutuality and transparency. CSH deposits are mobilized by a specialized institution, the *Bausparkasse*. These funds are only available to make loans to participants. In case the funds available are not adequate to meet current CSH loan demand, participants will be served according to well defined queuing rules. This closed circuit is generally isolated from the capital markets. The *Bauspar* system was created in the 1920s based as much on social as on economic and financial grounds. Although the first institution, the Wüstenrot, was a mutual it converted to a limited liability company two years after its

founding.[15] Originally the *Bausparkassen* attempted to provide all the finance required by homebuyers. However, this proved impossible (particularly in an inflationary environment) and by 1938 the government officially stated that the main activity of the Bausparkassen was to grant second mortgages. First mortgage funding was provided by a network of mortgage banks (*Hypothekenbanken*) funding themselves on the capital markets with mortgage bonds. During the 1930s public Bausparkassen were organized to work with a network of savings banks (*Sparkassen*).

28. The system was revived in 1948 after the currency reform. It developed rapidly following the 1952 Dwelling House Construction Premium Act, the specific aim of which was to encourage savings for owner-occupied housing. Savers fulfilling the terms of a contract (i.e., saving a target sum over a given period of time) received a government interest premium equal to 25 to 35 percent of the amount saved (up to a set maximum). This made Bauspar contracts attractive to savers as well as to potential home-buyers.

29. The French system was inspired by the already established German system. However, the original closed French system was deliberately modified by 1970 into an "open" system aimed at creating a tranche of savers who would be willing to leave their savings in the CSH system without exercising their loan rights because they found the yield on their savings attractive. The "free funds" so generated could be used by deposit institutions to fund other types of housing loans or invested in the new mortgage bond market. An important dimension of the French CSH system has been to stimulate long-term savings by relying on housing as a strong saving motivation of households. In the directed credit environment of the postwar period, the long-term French capital markets were dominated by government funding requirements and segmented. The CSH mechanisms were modified and "opened" to address the need for additional long-term financial savings.

30. The creation of the E-L system was part of a comprehensive package of housing finance reforms implemented in 1965 and 1966. These reforms aimed to encourage savings, develop market-based long-term finance and put an end to central bank rediscounting of long-term housing loans which had marked much of the immediate postwar period. Because CSH instruments are by design meant for equity building and second loan, a mortgage bond market was created at the same time (*Marché Hypotécaire*) to develop the supply of long-term principal mortgages.

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15 Boleat [1985].

31. The history of the French E-L system is worth outlining briefly as it throws light on the system in force today. There were three periods marked by the introduction of different instruments which coexist until today:

- *1952-1965:* a period of experimentation with private mutual savings organizations (*crédit différé*) which proved unstable and did not appear capable of meeting the financing needs of the sector. However, several of these mutual finance companies are still in operations within the small segment of specialist housing lenders.

- *1965-to date*: The E-L system is created with the "***compte d'épargne-logement***" or CEL contract. It is an instrument with terms very similar to the German Bauspar contract in term of length of saving phase (minimum of 18 months), low loan multiplier (1.5), and low deposit and lending rates. However, this instrument did not succeed very well due to the shortage of funds for principal mortgage loans to go with the E-L loans. This in spite of the creation of the mortgage bond market (*Marché Hypotécaire*) nine months later. All deposit banks can issue CEL contracts.

- *1970- to date:* A new type of contract is introduced: the "***plan d'épargne-logement***" or ***PEL contract.*** This PEL contract differs in several ways from the CEL contract. Its loan multiplier is larger (2.5 times). Its savings period is much longer (originally 4 years, extended to 5 years during problems years in the 1980s, then back to 4 years in 1993). Most importantly, the original pool of PEL contracts enjoyed a deposit rate of 8% which was competitive with after tax yields on long-term treasury bonds. This deposit rate had two parts: a basic deposit rate of 4% funded by the deposit bank plus a substantial interest rate premium of 4% funded by the government. Thanks to the government premium the lending rate was 5.5% refelcting an original spread of 1.5% (now 1.7%) over the banks' deposit rate.

32. The rationale followed by the French financial authorities for the interest premium was that it is more efficient for the economy to use scarce budget resources to stimulate private savings than to subsidize either production schemes or household expenditures. Until the reform, a significant amount of subsidies went to mortgage loans or producer loans. Due to the lagged structure of CSH, public funds could be leveraged since in any one year the interest premia actually disbursed by the budget would be a fraction of the savings actually mobilized (interest subsidies are paid upon completion of the contract). Over time this leveraging of budget funds was increased in two ways. First,

the interest premium was lowered to 2/7 of the interest earned from 1/2 in 1970. Second and more subtly, with the extension of the number of years following the savings phase during which the option to a loan could be exercised savers had an incentive to leave their funds into the system for extended periods thereby acting as "bons frères" and funding other's loans. The PEL contract has proven remarkably successful and dominates the French E-L system today. It has produced a very large pool of long term savings available to fund the mortgage bond market and a variety of housing-related purposes, not just CSH loans.

33. Finance Ministry authorities have kept CSH deposit rates competitive with alternative savings vehicles in order to expand the savings pool and attract many non-borrowing savers ("*les bon frères*" or good brothers mentioned above). The PEL based system is therefore an *open* system. Because these funds support a variety of lending purposes and loans are available immediately after completion of the minimum savings period, they are issued by general banking institutions with extensive branch networks and alternative funding capabilities.

3.4 Interest Rate Selection

34. As Table 5 shows, the French and German CSH differ substantially in their specific characteristics and options. However, from a financial management viewpoint, the main differences are in the determination of interest rates, the loan multiplier, and the timing of loan availability.

- Reflecting the strong price stability in Germany over decade, the Bauspar program features a constant, fixed, below-market rate on savings generally between 2.5% and 4%. Each financial institution has a choice in selecting its contract rate, but rates are very close.[16] The loan rate is fixed at a constant spread of 2 percentage points over the savings rate.

- The Epargne-Logement (E-L) features savings rates that are set to be competitive on an after-tax basis (interest is tax free) with other financial assets. The loan rate is fixed as a spread over the savings rate at the time the contract is initiated. These interest rates are regulated by the Ministry of Finance and have been adjusted over time. Pools

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16 In very recent years, some *Bausparkassen* have issued contracts at higher rates of 5% and 6%. See *FINANZtest*, May,1994, page 19.

of contracts with different interest and even maturity characteristics issued on different years can co-exist. Due to the lead time between contract and loan, the loan rate could theoretically be above or below market by the time the saver becomes eligible for a loan, immediately after completion of the minimum savings period which has been either 4 or 5 years. In practice, the interest on E-L loans has been at least 400 basis points below mortgage rates on the secondary mortgage market (*marché hypothécaire*).

3.5 "Loan Multipliers" and "Interest Multipliers"

35. The loan multiplier is an abbreviated name for the ratio between the loan amount that can be obtained for a given amount saving contracted. In the German Bauspar system the loan multiplier is 1.5. It is calculated directly as a multiple of the amount saved.

36. Due to inflation rates in France at that time, the "loan multiplier" was replaced by an "interest multiplier". The calculation of the multiplier was changed to take into account the pattern of saving installments over the life of the contract. Those who save a lot early accumulate more interest. On the other hand they are penalized more by inflation. Therefore it was decided that it would be more efficient and more fair to use an "interest multiplier" applied to the amount of interest earned during the saving phase of the contract. This removes the linear relation between the size of the savings account at contract maturity and the maximum loan amount. When she borrows, the saver faces a trade-off between the amount of the loan and the loan maturity bounded by the total interest amount earned. The "interest multiplier" for the CEL was kept at 1.5 as in German contracts because the contract initially had a short savings period of 18 months. While more flexible the CEL contract can be used only for repairs. On the other hand, the interest multiplier was raised to 2.5 for PEL contracts which initially had a savings period of 4 years.

3.6 Waiting Periods for the CSH Loan and "Interim" Loans

37. In Germany, there is an uncertain waiting period after achieving the savings target before loan funds are made available. Loans are rationed by a complex allocation process designed to ensure that new loans can be funded out of the institution's current cash flow (new savings plus loan repayments). The minimum savings period for a Bauspar contract is theoretically much shorter than that of an E-L contract, but in practice

it is a function of the size and term of the contract and typically involves a 3 to 4 year waiting period.

38. In the "closed" German system, savers may have to wait beyond the maturity date of their contract. Therefore a saver has been given the possibility to borrow the CSH loan amount at market (or near market) rates of interest prior to the award of the loan. These "interim" loans are then repaid with the proceeds of the CSH loan. Interim loans are funded by Bausparkassen outside the CSH system (i.e., through deposits or lines of credit from other financial institutions). There are no interim loans in the French CSH system because, by law, borrowers qualify immediately for a loan by the end of the saving period of their contract.

3.7 Financing of the Principal Mortgage Loan

39. A CSH is designed to help savers build up their equity and to fund complementary loans. Neither French or German CSH system is designed as the sole source of housing funds.[17] Borrowers typically augment their contract loans with loans from other sources of credit. A first mortgage covers the difference between the unit purchase price and the contract sum.

- In Germany, borrowers obtain first mortgages either on a fixed-interest basis through mortgage banks or a variable-interest basis through savings banks. Most of the private *Bausparkassen* are part of financial groups consisting of a commercial bank and mortgage bank (*Hypothekenbank*). Likewise, the public *Bausparkassen* are part of groups headed by a regional clearing bank (*Landesbank*), savings banks (*Sparbanken*) and mortgage bank. As a result, one-stop housing loan consolidating the various sources of funds has become the practice in the German housing finance market.

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17 Excess liquidity in CSH contract systems in the early years of development when more contracts are signed than loans made should not delude policy makers into believing that a CSH system can be self-sufficient and fund all housing finance needs. The assumption that a CSH system could finance the housing sector by itself was the fundamental conceptual flaw of the Tunisian housing finance system run under CNEL (Caisse National d'Epargne Logement). The Tunisians housing finance system had to be restructured extensively in the late 1980s. The CNEL state institution was converted into a specialist (state) housing bank (Banque de l' Habitat) with the same broad powers as the eleven other deposit banks of Tunisia. BH has complemented its CSH funds with domestic (tax based) long-term funds and foreign loans from development lenders.

- In France, both commercial banks, savings banks and specialized lenders provide mortgage credit on both a fixed and variable rate basis. Funding of these primary loans often comes from the E-L "free" funds not required for making E-L loans. E-L liquidities can otherwise be invested in the mortgage bond market.[18]

3.8 Large-Scale Success of the Two Systems

40. The long-term success of the French system can be seen in Figure 2 and for Germany in Figure 3. Both systems grew during the 1980s, with the French system expanding at a much faster rate. By the end of 1992, there were 19.5 million E-L accounts outstanding, more than one for every three French citizens. E-L deposits amounted to FF611 billion while total demand deposits in the banking system amounted to FF1,386 billion, and time deposits to FF2,601 billion. PEL contracts represent 80% of all E-L deposits, and CEL contracts only 20%. The growth in E-L deposits has slowed markedly since 1989, and CEL deposits have remained almost at the same level since 1982. This slowing down reflects several converging factors: the maturity of the system reflected in its very high rate of diffusion, the development of attractive saving alternatives (particularly the SICAV monétaires or money market mutual funds), a continuous decline in the demand for new housing since 1975, and to a lesser extent the relative decline in the value of government interest premia (subsidies), all of these coinciding with a period of very low inflation. In recent years, E-L loans have represented 22-25% of all new housing loans made each year. Given their shorter term, outstanding E-L loans represent 12.5% of all housing loans (FF250 out of 2,017 billion). Since its creation the aggregate uses of funds have been:

- 28.2% for new housing,
- 44.9% to finance the purchase of existing housing
- 26.8% to finance repairs and improvements.

The combined direct and indirect contribution of the open French CSH system to financing housing is much larger than direct CSH loans because E-L funds can be used to finance other forms of housing investment.

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18 This E-L liquidity or "*fonds libres*" is often mistaken described in English as "treasury" because it is reported by the Ministry of Finance as "Trésorerie". This data is in fact a stock and not a flow since it is measured by the difference between outstanding savings deposits and outstanding loans.

41. The diffusion of the Bauspar system throughout the population is equally impressive in Germany where there are 21 million holders of contract, a important fraction with more than one contract. This represents 35% of the population in western Germany. By the end of 1993, there were DM 144 billion in outstanding savings (including accrued interest) compared with DM 1,617 billion of non CSH deposits in the banking system (8.2%). There were DM 100 billion in contract savings loans compared to DM 640 billion in first mortgage loans (13.5%) and DM 1.08 trillion of total non-*Bauspar* housing loans (8.5%). Approximately 60 percent of all housing transactions have partial finance from a *Bausparkasse*. New deposits in 1993 amounted to DM 37.6 billion. New loans were approximately DM 23 billion compared with DM 60 billion in first mortgages and DM 95 billion in total new non-Bauspar housing loans. As in the French case, large share of new originations relative to outstanding loans reflects the faster amortization of Bauspar loans.

42. The *Bausparkassen* registered a decline in new savings growth during the mid-1980s, reflecting a cut-back in tax incentives and less advantageous relative loan rates (Figure 3). Savings contract balances have increased significantly since 1989, reflecting the expansion of the Bausparkassen into the former German Democratic Republic. As will be seen below, the relative attractiveness of Bauspar loans has also increased as market interest rates have risen. The use of interim loans has been growing with DM 50 billion outstanding at the end of 1993

FIGURE 2

Evolution of Épargne Logement, 1971-1992

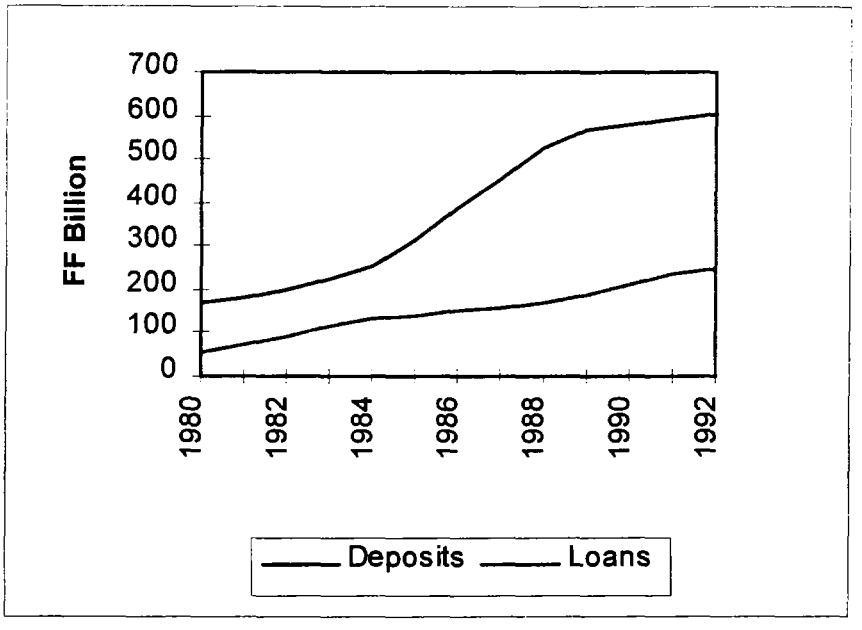
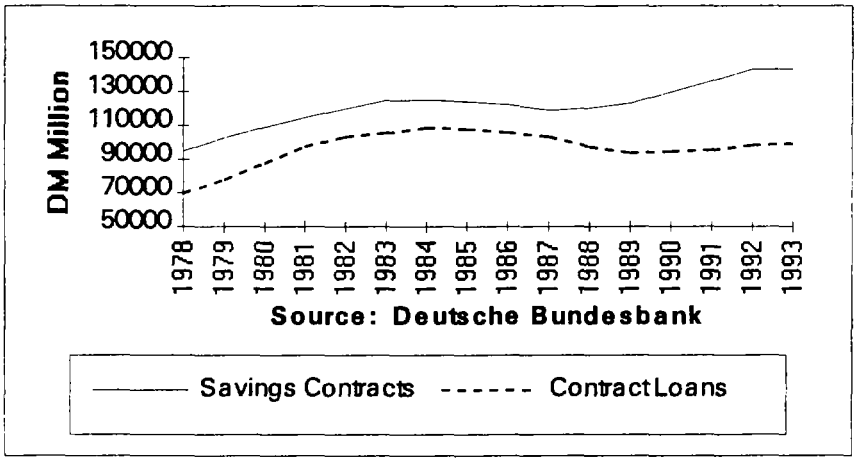


FIGURE 3

Evolution of Bauspar Savings and Loan Contracts, 1980-1993



IV. THE HOUSEHOLD PERSPECTIVE

4.1 Basic CSH Design Considerations

43. Why would a household enter into a savings contract for housing? What factors affect the potential demand for this type of financial contract? To be attractive, a CSH should provide credit that is cheaper on an all-in basis than alternative sources and/or provides features that are absent from competing alternatives. The cost of a CSH to a household depends on the value of a complex set of loan, savings and subsidy characteristics, as well as non-housing options if available.[19] The analysis must take into account the following factors:

- The value of the **below market loan** which depends on the difference between the fixed rate on contract loan versus the expected future rate on a conventional mortgage. This loan will be available at some future date depending on the contract (i.e., whether there is a waiting period) and the dynamics of the scheme (i.e., the evolution of deposits). The value to the household of this advantage can be expressed as the present value of the interest savings between the contract loan and expected market mortgage rate over the term of the loan.[20]

- The value of the **interim loan** (if offered). Borrowers who qualify for a contract saving loan may have to wait some period to obtain funds (if funds are dependent on the inflow of new savings and a waiting period is used to ration credit). An interim loan, made at or near market short term rates may be offered to bridge the period between completion and receipt of funds. This loan allows the household to purchase or renovate a house earlier

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19 The analysis presented in this section is a required starting point for any CSH instrument whether closed or open. It is not substantially altered by the existence of various options such as those present in the open French PEL contracts. Exercise of these options by savers will vary according to market conditions and family circumstances. The possible instability of CSH systems which may result from household decisions is discussed when evaluating a CSH system from the financial institution and the government perspectives.

20 The loan maturity affects this calculation. CSH loans frequently have more rapid amortization than conventional mortgages in order to increase reflows of funds to meet new lender commitments. Also, CHS loans operate as second mortgage loans. Thus, the relevant comparision is with a larger first mortgage or larger equity investment.

and reduces the opportunity cost of below market rate savings. This alternative may be important to households in an inflationary environment.

- The opportunity cost of **below market rate savings** reduces the value of the CSH to the household. The magnitude of this cost depends on the rate on the contract versus market rates for comparable maturity savings accounts. This cost can be expressed as the present value of the lost interest savings over the savings period.

- The final financial element of value is the **subsidy.** The subsidy may be in the form of tax preferences for savings (e.g., tax free interest or tax credits) and/or matching payments made by the government for individual accounts (bonuses). Subsidies increase the attractiveness of CSH by offsetting part of the opportunity cost of below market savings.

44. In deciding whether to participate in a CSH, the household is assumed to select the alternative that minimizes the cost of capital for home ownership.[21] The borrower chooses a CSH contract in which he/she saves part of the contract amount and receives a loan for the balance, the annualized borrowing rate on a CSH loan can be expressed as:[22]

$$(1) \quad r^L = Lr^C + I\, r^I + S\,[r^S - r^D]$$

where:

r^L = CSH effective loan rate

r^C = CSH contract loan rate

r^I = Intermediate loan rate where applicable

r^S = market rate of savings (expected after-tax yield to maturity)

r^D = CSH deposit rate (after-tax) plus government bonus (if applicable)

and

$$L + I + S = 1$$

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21 A more involved decision-making model would involve maximization of the present value of utility from consumption of housing and other goods over a given time period subject to an intertemporal budget constraint and various financial and liquidity constraints, see for instance Alm, Follain and Beeman [1985]. By specifying a rate of time preference, the cost of waiting (in terms of foregone utility from home ownership) can be included.

22 Equation 1 expresses the value of a CSH in terms of the effective loan rate. Alternatively, the present value of interest savings on the loan can be added to the savings rate to determine all-in return on savings.

L= Contract loan amount

I = Interim loan amount

S= Contract savings amount

45. In order to put everything on a comparable basis, r^L is calculated as the internal rate of return over the entire savings and loan period.[23] Abstracting from the value of the guaranteed loan option, the household would select the CSH if the all-in borrowing rate (r^L) is lower than the cost of alternative sources of finance.[24]

4.2 German "Closed" Contract

46. The evolution of the components of all-in *Bauspar* yield from 1982 to 1991 are shown in Figure 4. The Bauspar loan advantage (shown as a negative spread) declined steadily for the first 5 years of the period but widened in recent years as market rates have increased. The opportunity cost of savings has been almost a mirror image to the loan advantage, falling as market rates fell in the early and mid 1980s and increasing recently. The top line in the graph shows the steady decline in the interest subsidy.

47. The all-in borrowing rate from equation 1 (*Bausrate*) is shown along with a 10 year fixed interest mortgage loan in Figure 4. The Bausrate was considerably below the 10 year market mortgage rate during the early 1980s and the early 1990s. Not surprisingly, these periods have been ones with strong growth in savings (Figure 3). During the mid-1980s, there was virtually no yield advantage to a Bauspar loan. As can be in Figure 3 showing the dynamics of the Bauspar system, this period corresponded with a decline in new savings contracts. In their micro-analysis of household use of Bauspar savings, Supan and Stahl (1991) also found the quantity of savings to be responsive to the relative after-tax return. During this period, the stock of savings contracts declined. The recent revival of the system reflects the rising relative attractiveness. The stability of the all-in loan rate is noteworthy.

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[23] The spreadsheet analysis used to calculate this IRR and analyze the impact of inflation on CSH is explained in the appendix].

[24] Alternative sources of finance may be debt or equity. If debt, the relevant comparison may be either a higher LTV first mortgage or a market rate second mortgage. If only variable rate debt finance is available, the relevant comparable is the expected cost. If debt finance is unavailable the alternative is equity finance, with an opportunity cost of foregone interest on market rate savings.

Figure 4

Bauspar Loan Advantage, Opportunity Cost of Savings and Subsidy

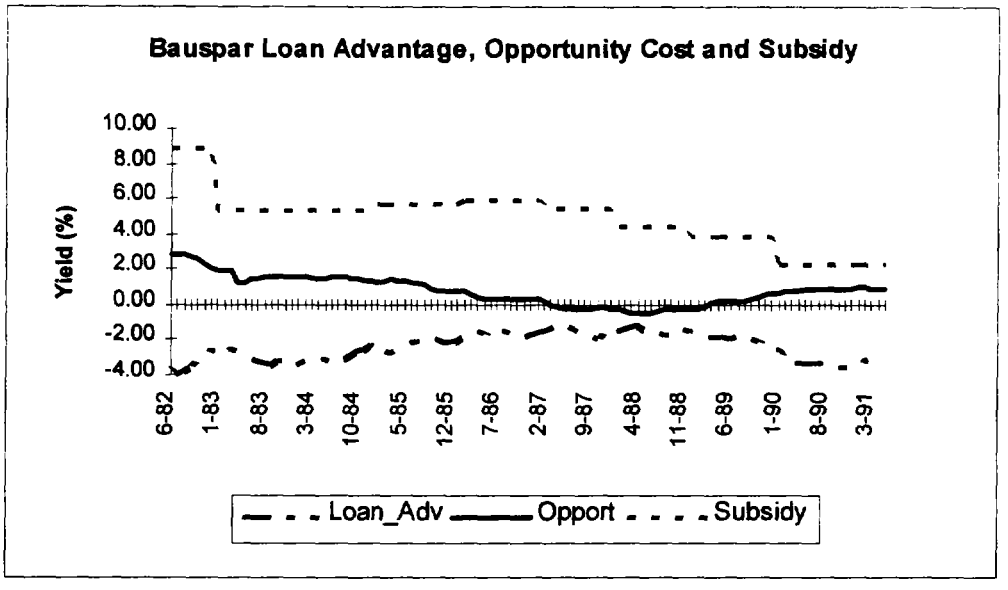
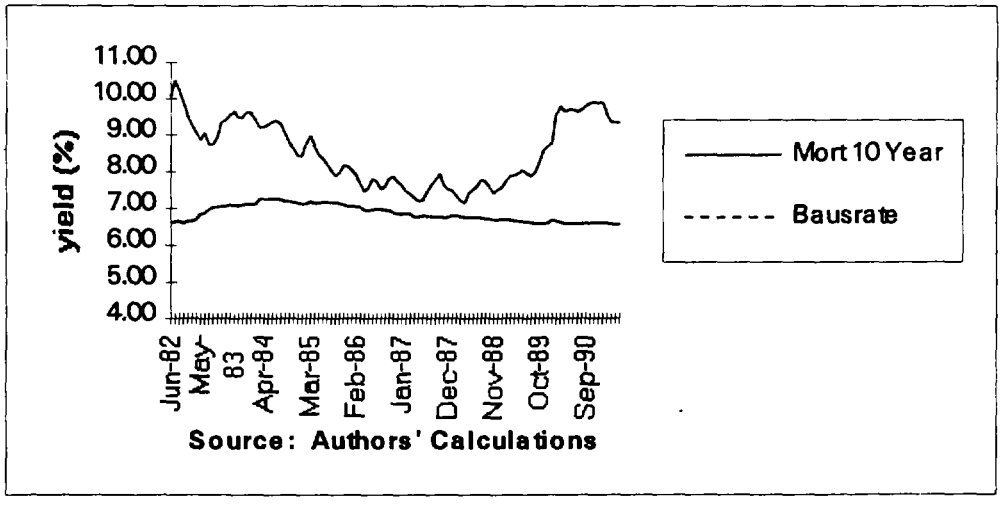


Figure 5

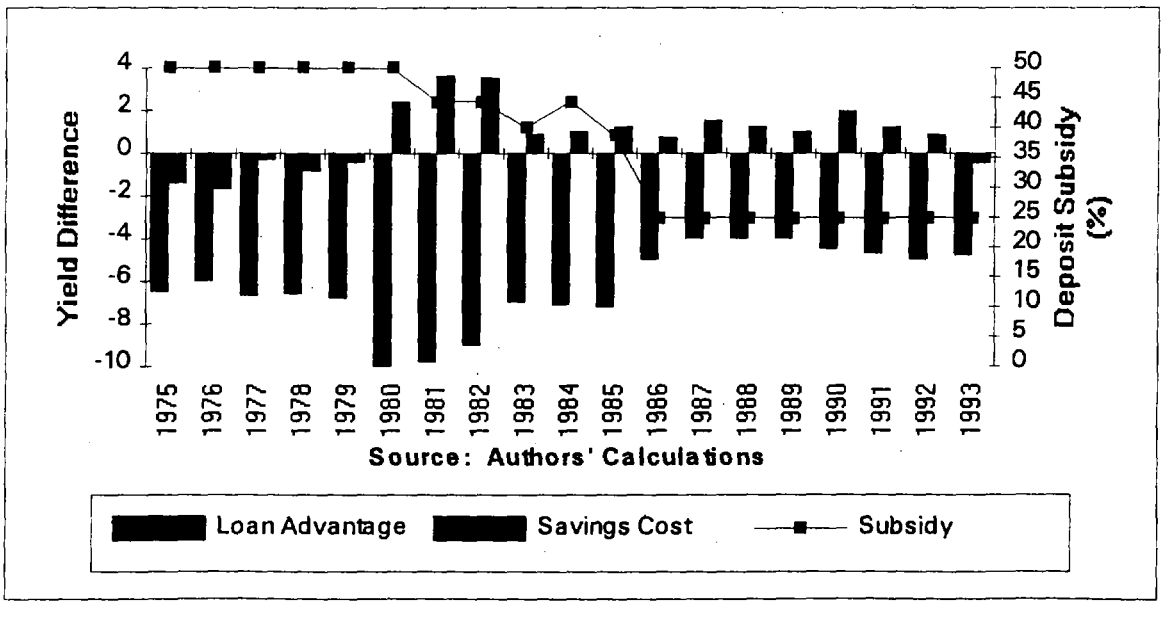
Bauspar All-in Loan Rate



4.3 French "Open" Contract

48. The analysis in this section refers to the *Plan d'Épargne-Logement (PEL)* which dominates the E-L system with 80 percent of the outstanding deposits. The success of the PEL comes from its very attractive yields during the savings phase. For most years the tax-free savings rates on contracts has been very close to the after-tax yield on government bonds, usually above it during the 1970s when housing output and the demand for mortgage finance was strong (dark bar in Figure 6). The deposit is somewhat liquid in that the contract holder is entitled to closing its account at maturity and collect the government savings bonus even if no housing loan is taken out. For the borrowing phase, E-L loan rates have fluctuated at levels between 40 and 60 percent of the mortgage bond rates on the Marché Hypothécaire (represented as a negative spread in the light bars in Figure 6). The connection between E-L relative cost and system performance is not as direct as in the German case because of the influence of (de)regulation and inflation. During the early 1980s, nominal interest rates were high leading to a reduction in the growth of new deposits and an expansion in loan originations. The resulting reduction in the trésorerie led officials to increase the minimum savings period. Deposit growth rebounded strongly in the mid-1980s as inflation moderated but fell after 1989 reflecting increased competition from money market accounts offered to households following financial market deregulation and attractive after-tax yields.

Figure 6
E-L Loan and Savings Incentives



49. The design of the French contract accounts for this variability in both loan and deposit growth. Holders of accounts opened when the deposit rates are relatively high have an incentive to deposit the maximum amount of savings and not take out a loan. Those who start accounts when rates are relatively low have an incentive to close the account or take out a loan promptly after five years if rates rise. Also, households can open multiple accounts through family members in the French system. As already reported with the description of the contract options in Table 1, these contracts can be consolidated into one operation after the minimum waiting period. This option interjects a greater degree of volatility in the volume of savings and exercise of loan rights.[25]

4.4 The Attractiveness of CSH Features

50. Factors other than relative cost may affect household decisions to enter into CSH. The guarantee of a loan with favorable terms for the purchase or renovation of a house upon completion of the savings contract is one of the principal features of a CSH. The guarantee is an option as the household is not obligated to take the loan. This option is particularly valuable to those households with some doubt about their ability to qualify for a market rate loan in the future (e.g., lower income or self-employed households).[26] Also, the CSH allows borrowers to demonstrate their credit worthiness through consistent savings behavior, an important feature if they lack a credit history. A savings contract may be appealing to some households because of its "forced" or targeted nature.[27] Also, the earmarking of funds for housing through specialized institutions may be appealing to households with limited experience with or mistrust of existing financial institutions.

51. The CSH systems developed at a time in which many households had limited mortgage borrowing alternatives. The guarantee of loan availability is attractive in and of

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25 We have not attempted to evaluate the user cost of housing capital in relation to the peaks and troughs of the demand for E-L loans. This would require a separate research task. A particular concern is the possible existence of procyclical interactions which might increase the instability of the E-L system.

26 Numerical valuation of this option would be very complex. The value of an option to obtain a mortgage loan with known terms sometime after fulfillment of the savings contract depends on the likelihood of qualification. Given pre-specified qualification (e.g., payment-to-income) rules the probability of future (market) loan approval depends on financial characteristics (e.g., market interest rates at the time of funding) and household characteristics (e.g., borrower income).

27 This incentive was emphasized by Guttentag [1975]. CSH are a form of goal oriented savings (the "goal" being accumulation of the downpayment and the "reward" being the availability of the loan).

itself but the availability of CSH funds were often required by first mortgage lenders. However, the uniqueness of the CSH contracts has faded with the development of savings and loan alternatives through the private market, and the increased competition in the supply of mortgage funds. The government subsidy for savings is arguably the only remaining unique characteristic. As a result, the future growth of these systems may be determined more by their relative price (incorporating subsidies) than their specific features.

V. THE INSTITUTION'S PERSPECTIVE

52. In Germany, Bauspar contracts are offered by fully specialized institutions the Bausparkassen: 21 private ones, of which all but three are owned by commercial banks, and 13 public ones owned by the regional central banks or Landesbanken). In France, E-L contracts can be offered by any deposit institution as part of a diversified portfolio of activities. 80.4 percent of the savings are with the dominant commercial banks, 14.3 percent with the private savings banks (*Réseau Ecureuil*), 5.3 percent with the branches of the public savings bank (*Caisse Nationale D'Epargne*).

5.1 German CSH System: Specialized Lenders

53. Conceptually, a CSH provider is no different than other types of financial institutions. It mobilizes funds and makes loans. Its sources and uses of funds depend on whether it is a specialized institution or a generalized credit provider. The Bausparkassen are specialized institutions. They obtain funds from savings contracts, cash flow from assets (i.e., interest and loan amortization) and other borrowed funds (mainly bank deposits). They invest in CSH loans, interim loans, government securities and bank deposits. The aggregate balance sheet for the Bausparkassen in 1992 is shown in Table 6. Note that 81 percent of the assets are CSH related loans and 73 percent of the liabilities are CSH contracts. The aggregate capital ratio was 5.3 percent.

Table 6

German Bausparkassen: Aggregate Balance Sheet, 1992

Assets	DM Million	Liabilities	DM Million
Contract Loans	**98,276**	**Contract Deposits**	**137,598**
Interim Loans	**44,382**	**Other Deposits**	**5,572**
Other Building Loans	**8,903**	**Deposits of Credit Institutions**	**26,207**
Cash and Bank Deposits	**13,981**	**Bonds**	**1,420**
Securities	**23,435**	**Other**	**12,801**
Other	**3,346**	**Capital**	**8,725**
Total	**192,323**		**192,323**

Source: Deutsche Bundesbank

5.2 French CSH System: Non-Specialized Lenders

54. In France, there is no published, consolidated balance sheet covering all E-L providers. CSH loans are one of many assets of French banks and CSH deposits are one of a number of liabilities. Like in Germany, the system is entirely administered with continuity by financial regulators who in addition to providing the basic framework of the system and decide on the value of each of its individual parameters.[28] It is therefore upon the authorities rather than the individual banks themselves that rest the financial equilibrium of the system. Excess liquidities deriving from CSH deposits can be used to fund a number of different types of housing investments, most prominently PC loans (regulated mortgage loans) and the mortgage bond market (CRH bonds). Conversely, if at any time there were insufficient CSH funds to meet CSH funding requirements such loans would have to be funded by the deposit institutions from other sources.

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28 In Germany, Bausparkassen are regulated by the Federal Banking Supervisory Office. In France, a long-established regulatory unit in the Treasury is responsible for monitoring other forms of savings including insurance and pension funds and their impact on financial markets: *Bureau B-3, Sous-Direction B: Epargne, Prévoyance, et Marché Financier. Service des affaires monétaires et financières. Direction du Trésor. Ministère de l'Economie et des Finances.*

5.3 Financial Risks of CSH Systems

55. Lenders are attracted to CSH as a way to mobilize long term funds primarily to meet the mortgage loan demand of their clients. Ultimately lending institutions will provide CSH programs if they generate sufficiently high risk-adjusted returns on equity.[29] The returns from CSH as well as the risks they present depend on the characteristics of the program, the lending institution and the macroeconomic environment. As financial institutions, CSH providers must manage financial risks of their portfolios. The three major financial risks are liquidity , interest rate and credit risk.

5.3.1 Liquidity Risk

56. The principal risk for a specialized CSH lender is cash flow or liquidity risk. The possibility of a cash shortfall arises when the cash from new deposits and existing loan payoffs is insufficient to fund loan commitments (i.e., loans to savers who have satisfied their savings contracts). Possible imbalances between available funds and loan commitments are regulated in the closed German Bauspar system by a well publicized point system, plus explicit negotiable loan features trading off loan size and priority in the queue. In the more opaque environment of the open French E-L system, stability comes from the liquidity provided by non-users (*les bons frères)*, and the powers of persuasion of branch loan officers of deposit institutions.

57. The magnitude of liquidity risk is determined by three factors. The first factor is the duration of the loans and the savings deposits. To be affordable, housing loans (particularly for purchase) must have relatively long maturities (e.g., 15 years of more). The longer the amortization period the smaller the periodic cash flow and the greater the loan duration. A lending institution may attempt to match the loan duration by attracting non-borrowing savers and/or lengthening the minimum savings period. The second factor is the loan-to-savings multiple. The larger the multiple, the greater the liquidity risk. The third factor is the nature of the loan commitment. If the commitment is an option exercised

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29 CSH are provided by both private and state-owned institutions in both countries. Although the pricing of CSH is determined by law, there is significant non-price competition and cross-selling of other financial products associated with their offering became increasingly important with the growth of retail banking.

by a qualified saver, the risk is greater than if the lender determines when the commitment is funded.

i. Closed Bauspar System

58. Because Bausparkassen are specialized institutions their dual solution to managing liquidity risk is to allocate loan funds based on availability of savings deposits together with a low loan-to-savings multiple (between 1 and 1.5). The lending institution is not obligated to fund the loan at any particular date. Savers are informed that receipt of loan funds is dependent on savings deposits. Savers are typically "prioritized", with those savers with the largest regular deposits and those borrowers selecting the shortest loan maturities getting highest preference (i.e., are first in line to get a loan). The "trick" to operating a closed system is attract sufficient new savers to minimize the wait period inherent in such allocation formula, as a longer wait period reduces the attractiveness of the CSH to consumers. The average wait period was 13.6 months during the 1980s. This allocation system appears to have worked well in the post-War period. However, regulations have been revised to adapt to changing market circumstances. The decline in new contracts during the 1980s led to the following changes:

- Increased average wait time for savers to obtain funds (beyond the two year minimum savings period before a loan can be obtained);

- Requirement that Bausparkassen deposit the surplus accruing from their market-rate (interim) lending to establish a reserve of 3 percent of savings deposits to meet the contract loan demand of qualified borrowers;

- Increased ability to use market rate financing and expanded investment security authority.

ii. Open Epargne-Logement System

59. The French solution to maintaining cash flow stability is to encourage significant numbers of non-borrowing savers. To foster such behavior, the system must offer savings yields close to or equal to non-CSH alternatives. The closer the yield is to market the less attractive such funds are to lending institutions (and the less attractive are the subsequent loans). The attractiveness of the E-L to lenders has been maintained primarily through the

combination of tax-free interest and savings bonuses provided by the government (allowing them to attract funds at rates significantly below market in pre-tax terms). Because E-L contracts are widely diffused through the banking system instead of being clearly localized in specialist institutions, liquidity risks are perceived to have a broader potential systemic impact. When deposit growth fell during in the years 1980-1984, contract maturities were extended from 4 to 5 years.

60. In both systems, lending institutions have access to other sources of funds. The Bausparkassen have deposits from and lines of credit with other banks. In France, general banking institutions offer CSH and can finance cash shortfalls from diverse internal funding sources.

61. The management and monitoring of liquidity is more transparent in the Bauspar system. If the Bausparkassen need outside funding, they must borrow funds from other financial institutions. The principal advantage of this arrangement is that the funding is likely to be arms length and at market rates. Such arrangements are a common way to manage cash among financial institutions. If used regularly and subject to periodic review by the line of credit provider they need not signal undue difficulties. However, extensive use of non-contract borrowed funds can be a precursor to profitability problems.

62. Because funding of CSH loans is part of general portfolios in diversified French deposit institutions, the potential for disguised cross-subsidization is significant. If the volume of CSH activity is large relative to the institution's total balance sheet, system maturation could lead to a profitability squeeze if funding at market rates were needed to meet CSH loan demand. But, conversely, if CSH contracts generate a significant amount of excess funds, these could be used to fund other types of housing loans with potentially disruptive competitive consequences for specialist lenders who fund themselves through the capital markets and not through retail deposits. Such an episode of predatory competition took place in the mid-1980s when the deposit banks intent on gaining market share offered first mortgage loans at rates less than or equal to riskless government bond yields. They could only originate such underpriced loans with the use of below-market CSH deposits. This predatory pricing behavior based on an opaque instrument coincided with a major liberalization of the financial system in the late 1980s. Analysts pointed out

that the administered CSH system born in another era had become incompatible with full market liberalization. [30]

5.3.2 Interest Rate Risk

63. Interest rate risk in the Bauspar system is limited by the contract design. Rates on both savings contracts and loans are fixed for the maturity of the contract and do not vary with market conditions. Depending on the contract characteristics, the savings contract rate will be between 2.5 and 4.5 percent. Loan rates are set as a fixed 2 percentage point spread to the savings rate. Interest rate risk can arise through the characteristics of the investment portfolio and other borrowings. The magnitude and characteristics of both is limited by regulation.

64. Interest rate risk is a greater concern in the open E-L system. As noted earlier, administered rates on various contract pools have been adjusted according to market conditions at time, and probable scenarios on future interest rates. As in the German system, loan rates are set as a spread over the savings rate. However, the potential for adverse selection is high with savers enjoying high contract rates maintaining their deposits and not taking loans and savers with low contract rates minimizing their contributions and immediately taking out below market rate loans. The introduction of non-contract funding can also create interest rate risk.

5.3.3 Credit Risk

65. The greatest attraction of CSH instruments lies in their ability to lower credit risk. A CSH provides a valuable signaling function A successful contract saver has demonstrated the ability to budget and set aside a portion of income for savings for an extended period (many systems reward regular savings as well as larger portions of income saved). The saver has "signaled" that he/she is a reliable borrower by revealing the self discipline and motivation necessary to successfully complete a savings contract. Thus, lending to CSH savers may be less risky than lending to a random segment of the population. In addition,

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30 Following the Basle agreement, the move to risk-based solvency ratios made the contradiction between the administered CSH and competitive and integrated markets even clearer. With mispriced mortgages, deposit banks have not made use of the securitization law of 1988 to securizatize mortgages and improve their capital position. The traditionally decentralized organization of loan servicing was also a factor. With the highly competitive financial markets of the 1990s, all financial intermediaries are forced to gradually eliminate obscure adjustment formulas and cross-subsidies between products.

the existence of a substantial downpayment obtained through contract savings reduces the likelihood of default in the event of unforeseen circumstances impacting family income.

66. The default rates on CSH loans are quite low according to French and German lenders. In France, delinquency and default rates for CSH housing loans are 1/10 that of any other type of housing loan. In Germany, data on defaults are generally unavailable. However, discussions with industry representatives put annual default losses at less than 10 basis points. It should be understood that overall default losses on all housing loans in both countries are relatively low, reflecting conservative underwriting (low maximum loan-to-value ratios) and relative house price stability.

67. The attractiveness of CSH to financial institutions ultimately depends on the characteristics of the program (in particular the rate spread) and their ability to manage liquidity, interest rate and credit risk. The Bausparkassen have been reasonably profitable in recent years. During the 1980s their average return on assets (ROA) was approximately 35 basis points and their average return on equity (ROE) was 7.5 percent.[31] The ROA is a bit higher and the ROE is a bit lower than comparable returns for mortgage banks and commercial banks. Although the returns are modest, the design of the program minimizes potential liquidity and interest rate risk. The Bauspar market remains quite competitive. Although the decline in subsidies has reduced the growth rate in savings contracts, participation rates remain high. The purchase of the private Bausparkassen by commercial banks over the past 15 years (part of their *Allfinanz* strategy) is evidence to the on-going viability of the system. Commercial strategies and opportunities for cross-lending of consumer loans and insurance products to contract savers has become increasingly important with the growing emphasis on the generation of fee income derived from the sale of these products.

68. In France, the profitability of CSH lending is not broken out on the income statements of deposit banks. There is a greater concern about the potential for liquidity and interest rate risk in the CSH system. These risks stem primarily from the contract design, particularly the large loan-to-savings ratio, the immediate eligibility for a loan after completion of the savings contract and the ability of households to take out multiple contracts. In addition, the interest rate subsidy has significantly distorted mortgage pricing

[31]Deutsche Bundesbank [1990].

at the margin and has become increasingly inconsistent with the liberalization of the financial system.

VI. THE GOVERNMENT'S PERSPECTIVE

69. From the viewpoint of governments, the problem of CSH has been one of balancing the benefits of (1) housing output expansion and (2) expected higher savings rates with three immediate major concerns: (3) the cost of budget subsidies and/or contingent liabilities, (4) the structural stability of the CSH system, (5) the potential distributive benefits of the system in light of the public resources involved. A final consideration (6) is the consistency of CSH systems with the development of market-based long-term finance and the liberalization of financial markets in increasingly open economies.

6.1 Housing Output Expansion

70. Output expansion was a high priority in both Germany and France during the postwar period. Housing reconstruction in Germany followed the urban destruction of World War II. In France, reconstruction also had to meet the very large stock adjustment required by 30 years of rent control and the end of major urbanization. In both countries, initial rebuilding was accomplished through large scale public construction programs with a significant emphasis on rental accommodation. The German Bausparkassen played a key role in the mobilization of funds for owner-occupied housing. The generous subsidy system adopted in 1952 resulted in a large increase in savings and eventually stimulated home mortgage lending. The CSH system was a major part of the French housing finance reforms of 1965 which resulted in an elimination of shortages and stabilization of the price-to-income ratio at or below a value of four within 10 years.

6.2 Higher Savings Rates

71. As a vehicle for increasing savings, CSH appears to have been effective. The aggregate savings rate has been quite high in both France and Germany during the post-war period. The gross savings rates in both France and Germany were in excess of 50 percent higher than that in the U.S. during the period 1970 to 1985.[32] Supan and Stahl have provided evidence linking CSH and incremental savings rates for Germany. They posit

[32]Carroll, Rhee and Rhee [1994].

that CSH is a form of dedicated savings. They find that both general and dedicated savings are influenced by their rate of return and that these two forms of savings are imperfect substitutes. Thus, increasing income has stimulated both types of savings. Importantly, they find that a strongly significant relationship between loan originations and savings deposits, demonstrating the strong incentive of the promise of a mortgage loan on favorable terms. This result is indirectly confirmed by Jappelli and Pagano [1994]. They show that liquidity constraints on households, as measured by lower loan-to-value (LTV) ratios on consumer and mortgage loans, are positively related to higher savings rates. First mortgage loans are offered at relatively low LTVs in both France and Germany (typically less than 70 percent). As shown above, CSH savings are an attractive way to accumulate a downpayment. In addition, CSH are often a lender prerequisite to obtaining a first mortgage for first-time buyer.

72. The experience of both systems suggests that government subsidies affect the characteristics of the participants as well as overall use. Supan and Stahl found that subsidization increased participation rates among lower income households in Germany (both the tax credit and the bonus are capped by amount and the bonus is targeted to lower and moderate income households). However, the effect of government subsidies on the overall savings rate of these groups was small.

6.3 Size of Subsidies and Government Contingent Liabilities

73. A central concern of governments, particularly ministries of finance, is how best to deploy subsidies and tax expenditures related to housing and how to keep them low enough not to impair macroeconomic management and price stability. In France, it was considered much better to restructure the housing budget to subsidize CSH in order to raise the household savings rate (earmarked for housing) than dissipating scarce public funds in subsidizing housing supply. In Germany, early emphasis on CSH subsidies for owner-occupied housing suggests a similar approach.

74. Concerns with the size of subsidies to CSH can take at least two forms: their absolute and relative magnitudes and their potential for distortion.. We deal first with the matter of magnitude. Comprehensive French national housing economic and financial accounts go back to 1984. They show that the French CSH system has grown very significantly and represents a significant portion of government support for housing. It is important to note that tax expenditures rather than on-budget expenditures are behind the

trend Total E-L subsidies in 1990 were 9.45 billion representing 0.27% of GDP (Table 7). This compares with on-budget total property and housing allowance subsidies in the year of 70 billion or 0.78% of GDP.[33]

Table 7:
FRANCE: Public Finance Impact of the CSH System (FF million)

Year	EL Subsidies paid out	EL Share of Civil Budget	EL Tax Expenditures	Total EL Subsidies	EL Subsidies to GDP
1984	5,447	0.64%	3,700	9,147	0.21%
1985	3,400	0.37%	3,700	7,100	0.15%
1986	4,400	0.46%	3,550	7,950	0.16%
1987	4,700	0.49%	4,750	9,450	0.18%
1988	5,915	0.60%	5,250	11,165	0.20%
1989	9,077	0.87%	6,360	15,437	0.25%
1990	9,758	0.89%	7,600	17,358	0.27%

Source: Le Compte du Logement, 1984-1992. (Ministry of Equipment and Housing, France.)

75. We do not have complete data for Germany. The interest subsidies paid to Bauspar savers in 1991 were DM615 million, representing 0.14% of federal expenditures and only 0.06% of total government expenditures. The 1991 housing allowance expenditures were DM 1.25 billion and 1990 combined federal and state social housing construction subsidies were DM 8.5 billion (this amount represents a sharp increase over the mid-1980s levels of DM 3 - 4 billion reflecting the construction needs brought on by re-unification and immigration). Total tax expenditures for owner-occupied housing in 1989 were DM 9 billion. These estimates do not include the tax expenditure associated with Bauspar savings. In Germany, however, most forms of deposit interest are tax free. These numbers do indicate that the degree of CSH subsidization in Germany is less than that of France, most likely reflecting the targeting of interest subsidies.

76. Considerably more significant than the volume of subsidies themselves is the deep impact that an open CSH system can have on the pricing of the much larger volume of non-CSH mortgage loans, and on resource allocation across the financial system. As reported earlier, because the CSH system has provided French deposit banks with low cost

33 Papa [1993].

deposits, they have originated mortgage loans at rates below the riskless yield of comparable government securities at several occasions during the 1980s. Such pricing was *prima facie* evidence of important distortions in a housing finance system that were incompatible with the open economy and the fully liberalized financial system of the 1990s. In addition, the fact that CSH can only be offered by depositories creates a distortion in their favor relative to specialized lenders which must fund themselves on the capital markets. The potential for distortion is far less with the Bauspar system because the below market rate funds can only be used for making below-market rate second mortgages. Although Bauspar can only be offered by specialized institutions, entry in the market is possible (i.e., a British building society recently started a Bausparkasse in Hamburg) and non-price competition is fierce.

6.4 Stability of CSH Systems

77. The stability of CSH system can be viewed at two levels: (1) the structural stability of a CSH system between deposits made and loans extended, and (2) the sustainability of a CSH system as the financial sector deepens and is liberalized. Both the German and the French financial systems were heavily regulated when the CSH systems were implemented and the systems today are still subject to tight regulation. The primary regulatory concern has been on the structural instability of the CSH system when it reaches maturity. In their early years CSH system have too much liquidity because many more contracts are signed than loans granted. When the system reaches market saturation the reverse can be expected.

78. The German closed contracts avoid structural instability through rigidity. The loan multiplier of savings made is kept below 1.5 and, loans are made only if funds are available. As noted above, the ratio of loans under savings contracts to savings deposits increased from 74 percent in 1978 to 87 percent in 1987. As a result, a number of safeguards were implemented which had the effect of increasing the average waiting time for savers to obtain funds. By the end of 1993 the ratio had fallen below 70 percent.

79. The French open contracts are less rigid because the loan-savings multiplier is larger and borrowers are entitled to a loan immediately upon completion of the savings contract. The commonly cited requirement for long-term system stability in France is that the ratio of borrowers within a generation of contracts does not go above 40 percent of total contracts. An alternative measure of stability is used by the supervisory authorities. Their

guideline is that the profitability of the system can be maintained if the liquidity ratio (*trésorerie*), conventionally measured as the one minus the ratio of outstanding loans-to-outstanding deposits, can be kept around 40 percent. The *trésorerie* dropped briefly below 40 percent during the early 1980s, creating a perceived liquidity crisis. The government extended contract maturities for new contracts from four to five years. Banks also could exercise significant influence on their customers to convince them to delay borrowing. With the start of the 1990s the system has returned to stability primarily due to the deep decline in the demand for housing with new housing starts in 1993 falling to their lowest level since 1954. Contract maturity has been brought back to four years in 1994.

80. The long-term structural problem now faced by the open French system is the greater difficulty in managing it in the new environment of financial liberalization. Liquidity is less of a problem than the likelihood of distortion in a liberalized financial system. The potential for distortion is not very significant in Germany because the system is closed. Although the financial system in Germany has not undergone a major liberalization such as occurred in France in the early 1990s, the closed nature of the system greatly reduces the likelihood that below market rate savings from CSH could be used to fund other types of lending.

6.5 Distributive Benefits of CSH systems

81. Providing middle-income and low-income households access to financial services is a prime rationale for creating CSH systems. Bauspar interest subsidies are expressly targeted to low and middle income households. The other major subsidy is a tax credit, the value of which is not a function of the households income level.[34] E-L subsidies are not explicitly targeted so as to increase the attractiveness of the program to non-borrowing savers and to reduce administrative costs. E-L subsidies are weighted more to interest income tax exemption. With the increasing diffusion of income taxation, the marginal benefits of E-L tax exempt interest inevitably benefits higher income groups more. In France, fifty-five percent of the direct loans went to upper-middle income groups and only thirty-one percent to lower-middle income groups during the 1980s. Conceptually, the E-L does provide benefits for households lower down the income scale to the extent that social loans are financed with excess CSH liquidities.

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[34] This tax credit is part of a capped overall credit for all provident expenses. Most insurance payments are covered by this tax credit. therefore the possibility to deduct Bauspar interest depends on whether the sum of all provident-related payments has reached the maximum set in the tax law.

82. When it comes to evaluating financial subsidies properly, the critical dichotomy between housing price affordability and housing finance affordability should be kept clearly in mind. Subsidies to CSH systems can only lower the cost of finance, not the cost of housing. When the level of the housing price-to-income ratio is too high, say significantly above 5, a large proportion of moderate and low-income households are excluded from access to housing ownership. The penetration of benefits into lower income groups in France was linked to both the liberalization of the finance system which induced the banks to expand their lending to lower income groups, but more importantly to the steady decline of PIR values.

6.6 CSH in Integrated Financial Markets: Winding Down Options

83. With the rise of alternative savings and lending vehicles, the relative importance of CSH is likely to decline. A major factor in their continued use will be the savings subsidies. In Germany there has been a cutback in the subsidy, resulting in a decline in the quantitative importance of the Bauspar contract but the participation rate remains very high. In part this can be attributed to the long history and solid reputation of the program. The fact that almost all of the private Bausparkassen are owned by commercial banks attests to their importance as a distribution outlet for a variety of banking and insurance products. If consumer demand wanes however, the internal structure of the contract will allow a spontaneous winding down of the program. In France, however, there appears to be a view that CSH continue to be seen as an effective means to stimulate the housing sector. In 1993, the CSH contract was modified and made more attractive as part of a larger housing stimulus package to reverse the secular decline in new construction that began in 1975, with the number of new housing units having fallen to its lowest level since 1954. The continued use of CSH as a sectoral policy tool combined with its inherent opacity suggests that an open system like the E-L system could not be easily wound down in a short period of time.

BOX 1:
CREDIT RISK AND THE NATURE OF A DEBT CONTRACT *

There are frequent popular misconceptions regarding debt and credit, in TSEs which are just emerging from a physically-oriented central planning environment where construction was financed on a cash basis. Among the most harmful is the assumption that debt is actually a commodity and borrowing like the purchase of any other good or service where price alone equilibrates supply and demand. Unlike most market transactions, debt cannot be easily summarized in simple terms of prices and quantities. Debt is a highly complex contract. It is a *promise* to repay principal and interest over a significant period of time. Its fulfillment is greatly affected by the institutional, legal, and socio-economic environment in which it is made. This promise has many dimensions:

- **Amount of funds** advanced
- Specification of **interest, whether fixed or variable** in relation to a benchmark rate
- Specification of **maturity**, when the loan must be repaid
- **Collateral** that the borrower must provide as security for the lender, if any
- Specification of the **circumstances in which the loan is in default** giving the lender the right to seize the borrower's assets (failure to pay interest and principal, breach of covenant regarding borrower's expected behavior)
- Specification of the **law under which default is to be adjudicated**
- Specification of the **seniority of the claim**, i.e. where the lender stands in relation to other creditors in case of default
- **Pledges in relation to further borrowings**
- Any further **commitment by the lender to renew the loan**
- Provisions for **transferability**. Can the debt be freely sold to other holders?

Whether or not the **contract is standardized** in terms of provisions and/or denomination (to facilitate securitization)

- **Call provisions** (whether the debt can be repaid early)
- Any **tax exemption** features

This generic list of financial contract features suggests the benefits of a CSH in educating TSE populations about the nature of long-term financial contracts.

* Adapted from : E. Philip Davis, *Debt, Financial Fragility and Systemic Risk*, Oxford U. Press, 1992.

VII. CSH SUITABILITY TO TRANSITION ECONOMIES

7.1 Household Perspective and Inflation

84. The attractiveness of CSH to households in TSE countries will depend on the features and the cost of the savings and loan contracts. From a cost perspective, the attractiveness of a CSH loan depends critically on the inflation and interest rate environment. Consider a stylized CSH contract modeled after the Bauspar model.[35] The characteristics of this contract are shown in Table 8.

85. To evaluate the attractiveness of a CSH contract in a TSE context, we compared the all-in CSH loan yield with a market fixed rate loan alternative under various inflation and interest rate scenarios. The loan yield was calculated under three assumptions about the wait period; *no wait period* (the French model), a *24 month wait period*, and prefunding the CSH loan with an *interim loan* at one percentage point under the market rate during the wait period. In addition to calculating the all-in loan yield we also computed the payment-to-income ratio and loan-to-value ratio assuming that the difference between the house price and the CSH (savings plus loan) is funded with a market rate loan.

86. The results of this exercise are shown in Figure 7. The attractiveness of the CSH clearly diminishes with inflation. The all-in loan yield rises with inflation and is greater than a comparable maturity fixed (market) loan rate when inflation is greater than 10 percent per annum with a wait period, 12 percent per annum if an interim loan is available and 15 percent per annum if there is no wait period.

87. The impact of inflation on affordability also is striking. With a fixed rate structure the real value of accumulated savings and the affordability of housing (for a given loan size) is eroded by inflation. Thus the portion of the purchase price that can be funded with a CSH loan falls sharply. In order to purchase the house, the portion funded by a market rate loan rises accordingly. As a result, the payment-to-income ratio rises sharply. At a 10% inflation rate, the portion of the house price a CSH can fund is only 21 percent

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35 This model can be adapted to the E-L as well. The main differences between the two models from the household perspective are a smaller spread between market and contract rates, lack of a mandatory minimum wait period for a loan after completion of the savings contract and a larger loan to savings multiple.

and the total payment-to-income ratio is 43 percent. Conversely, as the inflation falls, the portion of the house price funded by a given CSH loan increases improving affordability.[36] As expected, the longer the wait period the less attractive the contract.

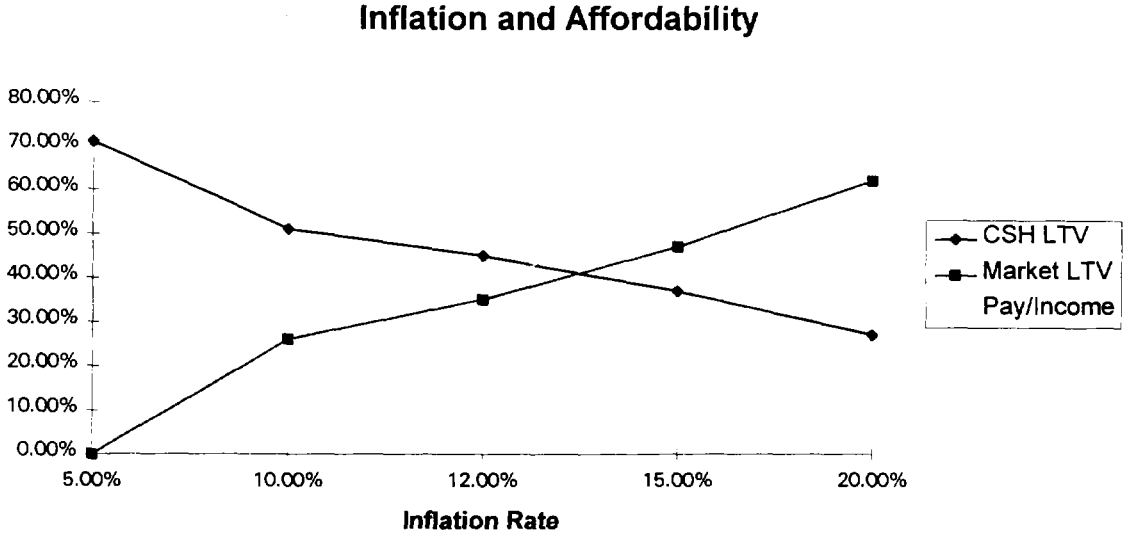
Table 8

Stylized CSH Contract For a TSE

Feature		Value
Contract savings rate		5%
Contract loan rate		contract savings rate plus 2%
Loan payment to period one gross income ratio		28%
Savings to period one house price ratio		40%
House price to income ratio		4:1
Loan to savings multiple		1:1
Market savings rate		inflation rate plus 2%
Government bonus		10% of annual savings
Contract loan term=market loan term		240 months
Waiting period		24 months
Market loan rate Interim loan rate		inflation rate plus 5% market loan rate-1%
Savings balance = downpayment		
House price less CSH loan and savings funded by market rate loan		

36 The net effect of inflation will depend on the length of the savings, wait and loan periods.

Figure 7



88. The attractiveness of the CSH to the household can be improved by increasing the loan-savings multiple. As shown in Table 9, an increase in L/S reduces the all-in loan yield, as well as reliance on the market rate supplementary loan and thus the total payment-to-income ratio. The effects of going to a ratio of 1.5 are relatively modest, however. Affordability is still a problem if inflation is above 10 percent and the all-in yield for alternatives involving a wait period are higher than the fixed rate market alternative when inflation is greater than 15 percent. An L/S of 2.5 (the French model) results in a more substantial increase in attractiveness, particularly in terms of cost (even with the 24 month wait period the CSH is a cheaper alternative at inflation rates greater than 15 percent per annum). However, as discussed below, a L/S of 2.5 would lead to serious liquidity problems for institutions offering CSH in an inflationary environment.

Table 9 (see Figure 7)

Pressure to Increase the CSH Loan-Savings Multiple Under Inflation

	L/S=1.5				L/S=2.5			
	Inflation				Inflation			
	5%	10%	12%	15%	5%	10%	12%	15%
Market loan rate	10.0%	15.0%	17.0%	20.0%	10.0%	15.0%	17.0%	20.0%
CSH IRR: no wait	8.2%	12.5%	14.6%	18.2%	7.2%	9.5%	11.2%	14.4%
CSH IRR, wait	8.8%	14.4%	17.2%	22.1%	7.5%	11.8%	14.4%	18.8%
CSH IRR, interim	8.5%	13.3%	15.7%	19.9%	7.2%	10.8%	13.0%	16.7%
CSH LTV	43%	31%	27%	22%	72%	51%	45%	37%
Market LTV	25%	46%	53%	61%	0%	25%	34%	46%
Pay/Income	28%	41%	47%	58%	24%	35%	41%	51%

L/S: Loan to savings multiple specified in the contract

89. This analysis suggests that a CSH will not be particularly attractive to households in TSEs from a relative cost or affordability perspective.[37] However, the guarantee of a loan for which the household doesn't have to qualify at time of contract completion may have significant value in a TSE. A CSH allows borrowers to demonstrate their credit worthiness through consistent savings behavior which may substitute for the lack of credit history. Furthermore, long-term fixed rate market alternatives do not exist at present. Thus, relative to a short-term fixed rate loan which would have to refinanced at an uncertain future rate, or a variable rate loan, the CSH loan may appear to be attractive to the household. However, the problem remains that in an inflationary environment, the household would have to use these sources of credit as well to purchase a house (reflecting the fall in the CSH LTV with inflation).

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[37] An alternative to a fixed rate instrument in an inflationary environment is an indexed contract. An indexed savings contract would significantly reduce the impact of inflation on the affordability of CSH loans by reducing the need for alternative credit. However, the potential negative amortization on the loans would greatly exacerbate the liquidity risk to providers.

7.2 Institution Perspective and Lack of Banks

90. CSH are appealing to lending institutions in TSEs as a vehicle to mobilize long term funds for housing. But can lenders earn acceptable returns offering such products? As in developed countries, the answer depends on the ability to manage the risks inherent in CSH.

91. Liquidity risk is a greater concern in TSEs than in developed countries, reflecting the liquidity preference of the population and the lack of funding alternatives. The French model in which loan and savings rates move in response to the market, borrowers can obtain loan funds immediately upon contract completion, and loan-to-savings ratios are high pose a great deal of liquidity risk to providers. Moreover, offering of CSH through general banking institutions could be disruptive to newly developing financial markets if the (below-market rate) funds were used for other lending purposes in the early years of the program.

92. Liquidity risk is easier to manage and monitor in the German model. A closed system in which the lender determines when loans are funded can be an effective method of managing liquidity risk. The principal danger may be in dealing with discouragement that may set in when depositors realize that housing purchase or construction may still be unaffordable. Because the behavior of depositors in TSE countries is likely to be less predictable than in developed countries, it will be important for CSH providers to establish lines of credit with other financial institutions to assist in liquidity risk management.[38]

93. Interest rate risk can be a significant problem for institutions using fixed rate instruments in an inflationary environment. Again the German model would be more appropriate for a TSE as it minimizes the potential interest rate risk from CSH specific activities.

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38 CSH providers modeling after the Bausparkassen have been established in the Czech Republic and the Slovak Republic. The only authorized source of funds for these institutions other than capital and contract savings contracts is from bond issues. The ability of these institutions to issue bonds is questionable. Bond markets are undeveloped in these countries and an attempted issue by one of these institutions would most likely signal that it was having a liquidity problem.

94. The signaling feature of CSH is valuable in managing credit risk in the TSE context. In developed financial systems, the two key underwriting tools are payment-to-income ratios and loan-to-value ratios. In TSEs there usually is little or no data to assess expected borrower repayment performance and income reporting is usually questionable. Property values may be difficult to determine, undermining the use of the loan-to-value ratio as an underwriting tool against default risk. A CSH allows borrowers to establish a credit record reducing the emphasis placed on collateral valuation and loan-to-value ratios.

95. Some countries are considering the use of indexed contracts to deal with the problem of inflation. Several directions are possible. The easiest and most obvious one is to index both deposit and lending rates to a short-term treasury rate of reference, with a negative margin from that reference rate for the deposit rate and a small positive margin for the lending rate; see for instance Dufoix (1989). In Poland, more complex contracts patterned after the dual-indexed (DIM) mortgage instrument are apparently under consideration.[39] The administrative complexity and commercial attractiveness of such indexed CSH products remains as yet entirely untested. It should be noted that the VRM solution destroys the principal attractiveness of CSH to households -- fixed predetermined rates of interests. The DIM solution exacerbates the liquidity risk of a CSH.

7.3 Government Priorities on Housing and Financial Sector Integration

96. Should TSE governments encourage the formation of CSH systems? In developed countries, the creation of specialized systems apart from the broader financial markets is not consistent with the trend towards integration of financial markets and increased reliance on market determined credit allocation.[40] However, the real policy issue may be different as TSEs have undeveloped, non-performing financial markets in general, and no market-based housing finance system in particular. Two more relevant questions then are: (1) whether a CSH system would impair the prospects for development of market-based housing finance; and, (2) if started, can a CSH system be wound down later when the financial system has deepened. Answers to both questions rest with the open versus closed nature of the contracts, the size of the loan-to-savings multiplier, and the level of subsidization of the contracts. Technical adjustments in these three variables are rather

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39 Herbst [1992]

40 See Diamond and Lea [1992a].

straightforward as seen from the evidence presented so far. The critical factor is to avoid levels of incentives that may create irreversible rent-seeking behavior on the parts of the key market participants: households and their political representatives, construction ministries and the building industry, and the banks and finance ministries.

97. The issue of net output expansion is much less clear today in TSEs than it was in the post-War European countries. The major housing problem in European TSEs is the mismatch between the current characteristics of the stock (wrong size, poor location, inappropriate design) and the desires of the residents. Until the existing stock is privatized and prices (rents) liberalized, the extent of output need is unknown.

98. CSH appear to have been successful in stimulating long-term savings in France and Germany. A key factor in their early development was the linking of a loan to satisfactory completion of the savings contract. However, in recent years the volume of savings appears to be based more on the after-tax return (including subsidies). As noted in the French discussion above, there is great merit in subsidizing savings as opposed to directly subsidizing housing purchase or construction. However, if the system is ultimately going to be based on subsidies, TSE governments should consider whether broader based contractual schemes such as pension and insurance plans are not the better way to stimulate long-term savings.

VII CONCLUSION

99. Evaluating the potential of a CSH cannot be dissociated from the economic and financial environment within which it is expected to operate. Historically, CSH systems have been very successful in post-War European economic, financial and technological environments. These environments have drastically changed over the last fifty years with the revolution in information technology, financial innovations, deregulation, trade liberalization, greater interest rate volatility, and the acceleration in the globalization of capital markets especially since the 1980s. Among the 25 or so TSEs which are presently moving to markets, social cohesion, political institutions, legal systems, level of economic development and of human capital vary widely. So does the potential for rapid financial development. Yet as latecomers to financial development all should draw the benefits of international experience. In particular, with the present information technologies and the rapid globalization of financial markets the likelihood that transitional economies can long maintain specialized housing finance circuits as part

of sheltered domestic financial systems does not appear very high. For TSEs, the main features of CSH can be summarized as follows:

- From a ***household perspective***, CSH contracts facilitate the accumulation of equity, and offer the prospect of a low-interest loan. However, in TSEs, inflation will easily erode the attractiveness of a CSH to the point that an equity gap will develop between the financing available and the cost of a unit. A CSH is unlikely to be effective in mobilizing sufficient long-term capital to meaningfully address the housing finance requirements of TSE countries as long as an environment of high and volatile inflation persists. Also, a CSH is not designed to be the exclusive source of long-term finance for the purchase of a new or existing housing unit.

- For ***financial institutions***, A CSH can play a very effective signaling role in sorting out steady savers. It can also reduce credit risks in poorly developed retail financial markets. CHS with savings phases of 4 to 5 years improve the duration gap between long-term mortgage loans and typically very short-term deposit liabilities. Depending on its design, a CSH could create difficult liquidity risk management problems. However, when the interest rate level on outstanding contracts differs sharply from current market rates holders of mature contracts will call their loans, on the other hand new savers will be reluctant to sign on at very low contract rates. CSH contracts can be designed to operate safely in inflationary environments, but such a result is achieved at the price of lower usefulness to households in terms of rigid contractual terms and low loan-to-value (LTV) ratios.

- From a ***government perspective***, CSH advocates often ignore the fact that these instruments' basic function is to assist savers in building equity for downpayment. To complement the second loan resulting from these contracts, funding for primary mortgage loans must be available. There will still be a need for developing other long-term sources of capital in the economy. The most important lesson of the open CSH experience is that contract designs with overly generous options in the takeoff phase of CSH systems can be very successful in mobilizing funds. But they could create large contingent liabilities for the government at the worst time in financial cycles. Control of such risks by financial authorities may lead then to perpetuate various forms of directed credits. With the continued segregation of housing finance from the rest of the financial system come inefficiencies that such compartimentalization usually entail.

101. There is a critical distinction between ***closed*** CSH systems and ***open*** ones. Closed CSH contract systems like the *bauspar* of Germany are of a strictly mutual nature and are transparent to monitor. These closed CSH systems can be wound down relatively easily under the pressure of competing products as financial development proceeds with the emergence of market-based long-term finance. However, to succeed, these closed CSH systems also demand a very low level of inflation not too likely to prevail soon in most TSEs. To mobilize funds rapidly in the initial stages of development of the financial system, "open" CSH contracts like *épargne-logement* can be quite effective. They offer attractive return to savers among whom a significant number do not intend take up housing loans immediately at the end of the savings phase. The uncommitted funds thus mobilized can therefore be used to finance non-contractual long-term loans. The problem is that to achieve such effective savings mobilization, open designs offer options to savers which may render the system opaque and the eventual liberalization of housing finance more difficult.

102. To summarize, a CSH would have no justification in perfect financial markets today. The more advanced economically, the more stable financially and the more rapidly a TSE economy is converging with and opening to Western economies, the least likely is a CSH going to make a difference. On the other hand, in the take-off phase of the embryonic and unsteady financial markets of TSEs, CSH could play a role. In the initial development of financial systems, CSH may provide "additionality" in two ways: (a) by overcoming the severe information problems afflicting financial contracts in TSEs; and, (b) by contributing to a higher domestic savings rate.

103. Before introducing any CSH government regulators should identify and thoroughly investigate the financial costs and benefits of every option embedded in the proposed CSH contract. They must insure that the CSH design will be compatible with the long-term development target of a competitive and well integrated financial system. These designs should be such that the resulting CSH system can wind down when the financial system will have gained sufficient depth. That is to say when retail markets are developing, competing savings instruments exists and borrower credit evaluations are becoming effective. Closed designs should be preferred.

104. A danger with promoting CSH today is that they may distract attention away from the steps needed for the development of a complete housing finance system. The first best policy is give a high priority to the development of broadly-based contractual savings such as pension funds and life insurance systems. These can form the core of market-based

long-term finance and support the growth of mortgage bond markets and other secondary mortgage markets. Like a CSH, this first best policy requires monetary stabilization and long-term price stability.

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