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**Financial, fiscal and housing policy aspects of  
Contract Savings for Housing (CSH) in Transition Countries –  
the Cases of Czech Republic and Slovakia**

**Final Report**

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### **Glossary of Terms and Abbreviations**

CNB	Czech National Bank
CSH	Contractual Savings for Housing
P.S.S.	Prva Stavebna Sporitelna (Slovakia)
MMR	Ministry of Regional Development (Czech Republic)
NBS	National Bank of Slovakia
NPL	Non-performing Loan
SLSP	Slovenska Sporitelna (Slovakian Savings Bank)

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# **Financial, fiscal and housing policy aspects of Contract Savings for Housing (CSH) in Transition Countries – the Cases of Czech Republic and Slovakia**

## **Executive Summary**

### **Purpose**

This study looks into first ten years after the implementation of the contract savings for housing (CSH<sup>1</sup>) system in Slovakia and the Czech Republic, a closed savings and loan system which isolates borrowers from interest-rate volatility by fixing both savings and loan rates. The CSH system, elsewhere referred to as ‘building savings’ or ‘housing savings’ system, was implemented in Slovakia in 1992 and in the Czech Republic in 1993. In both countries they are copies of the Austrian and German ‘Bausparen’, a child of the hyperinflation of the 1920s which had led to a breakdown of capital market finance for housing and fostered the development mutual savings and loan systems along the lines of the anglo-saxon S&L tradition. Precisely at the time when notably the U.S. broke with the traditional model, in the early years of the New Deal, Germany decided to further regulate and publicly support Bausparen as a complementary funding channel to often bond-financed mortgages. Later, Bausparen was exported to Austria where it gained particularly high popularity.

### **Hypotheses**

Beyond descriptives, the study focuses on assessing the benefits and costs of the system from a financial sector and housing sector perspective for the two countries, and draws conclusions for its possible implementation in other transition countries. Candidates for benefits are the mobilization of savings, in general and for housing specifically, the development of a housing finance markets in an initial situation characterized by high interest rate volatility, lack of intermediation capacity and undeveloped capital markets, and a relatively swift penetration of the borrower population with moderate income levels that is more difficult to achieve with traditional mortgage finance instruments. Candidates for costs are the large fiscal costs in the form of savings premiums and other support, the potential instability of the system due to demand fluctuations, and the fragmentation of banking industry and capital market resulting from the implementation of CSH on the basis of special banking. Both benefits and costs are discussed in the context of overall mortgage market development.

### **Main Findings from the Case Studies**

*Slovak Republic.* The CSH system in Slovakia started in 1992 under the traditional model, which is characterized by long-term savings funding long-term loans, both on product and balance sheet level<sup>2</sup>. Since 2002, under pressure through declining interest rates and influenced by recent far-

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<sup>1</sup> The author adopts terminology and abbreviation from Lea and Renaud (1995)

<sup>2</sup> The reader is referred to the Annex for detail of the mechanics of CSH.

reaching changes in Austria<sup>3</sup>, the market leader P.S.S. has taken steps to move from the closed into an open - more building society style – business model. Borrowers are now able to obtain long-term loans with just short-term or even no pre-savings, and permanent entry into the mortgage market is an option under consideration. This also reflects the legal and operational problems encountered when attempting to integrate CSH and mortgage lending into a single funding construction, combining first and second mortgages, - a form of housing finance that is the rule in Germany<sup>4</sup> but is rather uncommon in Austria<sup>5</sup>. Loanable funds with Slovakian CSH institutions are now almost entirely invested in customer loans. Additional pressure to remain competitive in lending is exercised by the government, which is strongly promoting the competing mortgage banks and has cut back on support for CSH.

In the first ten years, under the restrictions of the traditional model, CSH institutions promoted the lending markets for housing modernizations as well as for the acquisition of moderately priced housing stock, in particular flats sold by local governments. Given initially high interest rates and high costs of new construction relative to incomes, the mortgage market started with a lag of 5-8 years. While saving in CSH deposits is broadly popular, borrowing from CSH institutions and from mortgage banks has therefore so far shown little overlap. Only 20% of the CSH loan portfolio is secured by mortgages. The CSH system has so created access to finance for a large number of moderate-income borrowers, with average loan amounts in the range of 1-3 monthly incomes.

The fiscal costs of this outcome have been large, in contrast, and problems were created that so far have not been solved. Slovakia started with the highest savings premium level recorded for any CSH system in transition countries. Thus high demand was created that enabled the CSH institutions to make significant profits through investing their low cost deposits in securities or interbank loans. These profits were largely put into reserves, rather than being repatriated. Various attempts to correct the situation in the late 1990 by altering investment and premium conditions resulted in the perception of stop-and-go policy, which have contributed to a reduced attractiveness of CSH deposits for consumers. The combination of increasing demand instability and changing business models could imply greater maturity mismatch in the future, a possible challenge for supervisors.

*Czech Republic.* CSH in the Czech Republic continues to strictly follow the traditional matched funding model. The perception by the public as a fiscally supported investment vehicle rather than a source for housing finance is strong. Below 30% of deposits are currently invested in client loans, and only one out of six savers is borrowing. Czech CSH institutions have reacted to the capital market rate decline primarily by lowering the rates on both savings and deposit sides. As the premium is written into the enabling law for CSH rather than the annual budget law, as they are in Slovakia, its level has not been adjusted since 1993; on a premium-adjusted basis CSH savings today produce a yield that is 6 times as high as the yield of bank deposits. Consequently demand, contrasting again with Slovakia, has strongly grown in recent years. This further exacerbated the strong substitution of bank deposits that had been a feature of the system already

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<sup>3</sup> After the mortgage market rate had dropped below CSH loan rate in 1999, Austrian CSH institutions were hit by a prepayment wave that triggered a change in the main loan product type from fixed to capped adjustable rate. At least one institution – S-Bausparkasse - now offers mortgage loans up to €300,000 (couple) without a pre-savings requirement. For details of the Austrian premium formulation, see Annex.

<sup>4</sup> CSH loans in Germany are typically registered as second mortgage loans, loans provided by banks, savings banks and mortgage banks as first mortgages. Historically, the latter lenders operated under stricter loan-to-value limits than Bausparkassen.

<sup>5</sup> In Austria, historically government provided a large proportion of second mortgage lending through public banks. These banks conceded the first mortgage position to Bausparkassen, which also, as a result of high premium levels and eligibility limits, provided relatively large CSH loans.

since its inception. Due to their large liquidity surplus, CSH institutions turned into the main financiers of income tax-exempt mortgage bonds. Although the CSH try now hard to push for new lending, they face obstacles related to a restrictive interpretation of the housing purpose of the loan and increasing levels of default. The strategy to develop a senior-subordinate mortgage-CSH loan funding structure similar to Germany has been met both legal and operational complications. In particular, the currently attractive mortgage lending rates render the cross selling of CSH loans difficult.

The functions of CSH for the Czech housing sector have been broadly the same as in Slovakia, with the caveat of overall lower lending activity. The main focus have been housing modernization, an area in which CSH institutions can be assumed to be market leaders over commercial banks by a wide margin, and to a more limited extent of transactions. Due to heavier subsidization and higher incomes, mortgage lending had developed already in the last half of the 1990s, but again there is hardly any competition between the two loan forms due to differences in loan size, loan purpose and social incidence.

Even more so than in Slovakia, the fiscal costs of CSH in the Czech Republic have limited the development impact of the system and raised the question of its opportunity costs. While Slovakia in 2002 paid state premiums of 0.28% of GDP to savers, due to the lag in premium adjustment to capital market conditions the Czech Republic disbursed 0.49% of GDP, absorbing 40% of the country's housing policy budget. A premium adjustment is also overdue as the strong surge in savings creates potential instability for those institutions that have not reduced their savings rates in time to match lower capital market yields. Reducing both CSH premium and mortgage bond subsidies simultaneously, as the current capital market situation would suggest, could hit some institutions hard. As the current contract tide becomes due around 2007/8, changes in the saver-borrower relation and rising interest rates might impose liquidity risks that raise the contingent liability of government. As in Slovakia, stabilizing demand by adopting a more rational premium model seems to be a priority.

### **Cost and Benefit of CSH in the Case Countries**

From a *financial sector development* perspective, in both countries, CSH has created the benefit of developing intermediation in a segment of housing finance that was not covered by other lenders. Substitution with mortgage lending has not been a serious issue so far due to differences in collateralization, investment types and target groups. Distortions of the relative user costs of capital existed and could have potentially opened opportunities for arbitrage, but they went both ways due to a high inclination to subsidize mortgage lending, too.

Very critical is the cost perspective: taking market penetration and lending activity indicators only the Slovak case can be called a success. Larger lending scale is needed in particular in the Czech Republic to yield sustainable operations under a more rational public support scheme that will support only a lower cost base. Moreover, as incentives are set such as to maximize market penetration of deposits, the screening function of the system is currently impaired, with the result that institutions need to set up costly additional screening infrastructure to sustain lending growth. While fragmentation has been limited with regard to asset substitution, it still is thus still an issue from an institutional perspective.

An important open question in that regard is the future of the CSH product in the market for new construction. Here, the question of substitution or complementarity with the mortgage market will become virulent. Due to legal and institutional problems a complementary division of labor between first and second mortgage position as practiced in Germany is not yet clearly established

in either country. This might confine CSH institutions to the modernization and small land and housing transactions market for some time to come.

The form of implementation of the CSH deposit product also brought unnecessary turbulences to the time deposit market in both countries. This was particularly problematic in the Czech Republic where the relative after-tax-after-subsidy returns of CSH deposits became very large. The author argues that these problems could have been largely avoided by a different subsidy formulation. On the positive side, in both countries banking crisis occurred during which CSH institutions, backed by foreign owners, proved as a stability anchor in the deposit market.

It is too early to call the question of net benefits for the financial sector. There seems to be room for improvement in both countries. The decisive levers are higher market penetration, greater institutional consolidation - in particular in the Czech Republic, and better co-ordination with the mortgage industry.

From a *housing sector development* perspective, disregarding fiscal opportunity costs for a moment, the system has created a number of measurable benefits. CSH is relatively well targeted through its small average loan amount of 5,000-6,000 US\$, although this can be multiplied within limits by several contracts per family. Through the large numbers of small investors involved – in both countries cumulatively 500-600,000 loans were extended to perhaps 200-300,000 borrowing families, a significant attack on the mentality of virtually costfree housing was launched. The effect is important, as both countries have not completed rent reform. Although precise data is unavailable and leakage into grey areas of admissible loan purpose definitions must be considered, CSH can be assumed to have funded a sizeable share of the housing investment market of small and moderate size. Expanding contract ownership to legal persons, including condominium associations, which is tested currently in Slovakia following the Austrian example, has the potential to address some notorious funding problems for common areas of multi-family stock. CSH has been less well suited to fund sales of new finished housing units, which are however unaffordable for the large majority of the population.

This generally positive result is greatly diminished by the large and partly uncontrolled fiscal costs. Although CSH premia are set by and budgeted under the relevant positions of the Finance Ministries, housing policy budgets are indirectly crowded out through the size of the subsidies.

- The first years were characterized by strong leakage to non-housing uses by savers, which did not take loans and withdrew their deposits, and to profits of CSH institutions, which invested the deposits at considerably higher rates in the market. It is essentially left to the discretion of the institutions to use their increased capital to support stronger loan growth.
- Since the decision was taken to not index assets and liabilities during the initial inflationary period and consequently subsidize nominal rather than real rates, subsidies were much larger than needed.
- The only caveat to be made is that mortgage finance subsidies were even larger than CSH subsidies in Slovakia. In the Czech Republic, the reverse was true.

Implementation problems diminished the benefits for housing, too. In Slovakia, the Ministry of Finance's power to change conditions, while conducive to minimize misalignment to capital market rates, created credibility problems when for fiscal reasons premium cuts were extended also to existing contracts. In the Czech Republic, in contrast, the Ministry's inability to change premium conditions that were enshrined in the enabling law rather than the annual budget law *at*

*all* created the – worse – scenario of generating excessive savings returns and consequent distortions in the time deposit market.

Given these cost issues, over which housing policy makers in both countries had little influence, the net benefit of CSH as a housing policy instrument appears ambiguous. The net benefit for the housing sector could be improved through measures supporting improved targeting and reduced leakage, the swifter expansion of CSH schemes to fund common area investments in multi-family stock, and a rationalization of the subsidy policy.

### **Lessons for Implementation from the Case Countries**

The experiences in Slovakia and the Czech Republic suggest a number of direct lessons with respect to implementation in an initial transition context:

- To limit fiscal costs at elevated levels of inflation and under uncertainty over scale and speed of the disinflation process, the product could be indexed on both savings and loan side. Due to failure to take this decision, fiscal expenditures have been larger than needed in both countries<sup>6</sup>.
- If nevertheless – for example for general macroeconomic reasons – indexation is not practiced and high savings premium levels are chosen to support low deposit rates, the profits of the CSH institutions could be managed. Various options to skim excess profits are available, from taxation to the creation of reserve accounts benefiting future collectives. More radically, subsidies – while still linked to pre-savings - could be concentrated on the lending rather than the funding side, where they promote the development purpose of consumer lending more directly. This has broadly been the policy in the mortgage sector in both countries<sup>78</sup>.
- The observed policy lags on the one hand and stop-and-go policies on the other hand could be minimized by adopting a premium formula that contains an explicit link to either inflation, nominal or real capital market rate levels. Such a formula would reduce perception of political risk and help stabilize demand by excluding yield misalignment with alternative investments, in particular with respect to choice between CSH and bank deposits. The Czech experience moreover demonstrates that premium levels should not be fixed in the enabling law.
- The intermediation capacity built up with substantial public resources could be more effectively used in order to further both financial and housing sector development purpose. The initial excess liquidity of the system can be reduced by more flexible rules

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<sup>6</sup> In mortgage lending, the rate buy-down programs followed the same nominal rate reduction philosophy. However, in contrast to CSH, here borrowing rather than saving was directly subsidized which led to a much delayed and more limited realization of fiscal costs.

<sup>7</sup> Although funding subsidies here persist, such as the income tax exemption for interest paid on mortgage bonds.

<sup>8</sup> Given the experience under the Meciar government, caution must be advised when considering such a step. The decision to link the CSH premium payment to the actual take-out of a loan in Slovakia resulted in a strong drop in new deposit originations. The reasons were twofold: the closed funding model relied on a significant number of good brothers, which in this case deserted the system, and CSH by that time required long minimum savings periods before loan takeout was possible, limiting incentives for borrowers to use the system. Subsequently, Slovakia adopted a compromise, allowing early withdrawal with full savings premium only if loans were taken, but continuing to support good brothers when they fulfilled the longer minimum savings period. This model seems to have structured incentives reasonably well.

A bolder step to completely refocus subsidies on the lending side could be considered in particular if the setup was such that CSH institutions could openly vary their funding sources, e.g. under a building society model (see below). In this case, the subsidy could be determined as in the mortgage bond system by determining average costs of funds for a given time period, an admissible spread and an affordable loan rate.

- on admissible loan purposes, and - if necessary - affordable housing goals. Targeting can be improved by limiting the number of contracts per family and/or per lifetime.
- The possible liquidity effects of volatile demand conditions with their negative repercussions on contingent fiscal liabilities can be addressed with actuarially determined technical reserves.

### **Lessons for System Choice in other Transition Countries**

From a *financial sector development* perspective, the two main decision issues are system choice, including choice of product and intermediating institution, and implementation strategy.

The CSH *product* conceptually fits well into an *early transition context* due to its potential to provide access to credit for a broad class of low- and middle-income investors undertaking housing modernization and small land and housing transactions. Given the high latent demand and willingness to pay in these sectors, CSH present a chance for an early deepening of consumer finance with relatively safe assets. The likelihood of CSH to significantly crowd out the parallel development of mortgages, which will cater primarily the secondary and new construction market for housing requiring large loan volumes, is initially low and will stay so for the first 10-20 years of transition. If sufficient additional legal and institutional conditions are put in place, admittedly a big if in practice, CSH loans could also serve as a protective second mortgage layer for mortgage finance, which initially needs to operate under tight loan-to-value ratio constraints.

In contrast, the benefits that CSH provide for developing the time deposit market specifically and steady savings behaviour in general seem to be overstressed, given the vast range of options to develop the banking, contractual savings and capital markets.

Adopting CSH *institutions* under a special bank act seems to be the more problematic decision. Issues arise for small and mid-sized transition economies, which will lack the scale to sustain a monoproduct mortgage specialists and face supervision capacity constraints<sup>9</sup>. In order to tap the cost benefits of greater scale for both investors and supervisors it could be considered to develop the CSH product as an element of the product range of specialized mortgage lenders (building society, mortgage finance company), governed by a special product rather than a special bank act. Less reliance on a single product would also limit the strong lobbyism for the state premium, due to its lower leverage for the institution's profitability. The author is less optimistic with regard to the third institutional option, encouraging universal banks to offer a specially regulated CSH product, as many universal banks lack sufficient focus to distribute, service and further develop the product. This may stay the only viable option for small financial systems, however.

When designing the institutional structure in transition, close attention should be paid to the potential consequences of the conflict of interest that is implied if private, often foreign-owned, corporations manage a local collective of savers. Insurance and mutual fund industries face similar problems that are regulated through statutory investment and profit allocation mechanisms. A more radical option would be to set up institutions as mutuals from the start, hiring foreign lenders under a management contract to assist setting up business.

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<sup>9</sup> The institutional question is currently heatedly discussed in Austria and Germany where mortgage markets have sufficiently matured: while Austrian CSH institutions take steps to develop from Bausparkassen into building societies with a full product range, German CSHs for the moment stick to their current second mortgage lending business model and face increasing competition by mortgage insurers and self-insuring mortgage lenders. While these constellations lie well ahead on the time scale for most transition countries, the costs of a possible exit strategy for specialized institutions should be considered in advance.

The CSH product has the potential to be a reasonably efficient channel for *housing sector development*, again given an early transition context, since it primarily appeals to the many consumers that cannot afford to buy new finished housing and rather acquire and modernize the existing stock or buy land and build in self-help. Enabling broad borrowing activity rapidly is also important in a context of low historical willingness-to-pay for housing, which is often still supported by ongoing rent controls and subsidies for the de-facto public multi-family housing stock. CSH can also support housing investment by legal persons, in particular condominium associations willing to invest into structural modernizations (e.g. repairs, new energy systems, energy conservation measures) of the multi-family stock.

However, it is pivotal that housing policy rather than fiscal policy makers make the final choice over whether the system should be adopted or not, or whether alternative housing policy instruments would be preferable<sup>10</sup>. This has not been the case in either case country, leading to excessive fiscal costs and weak program design and implementation. Developing the policy menu should be the subject of a thorough housing sector and fiscal analysis that considers the costs and benefits of alternative instruments for the different subsectors of housing finance<sup>11</sup> and accounts for all costs, including frequently non-budgeted costs such as tax exemptions and the contingent liabilities of public guarantees.

Moreover, if choosing to adopt the system, housing policy should have effective control over the size and targeting of CSH subsidies. Enabling housing to steer CSH costs as a part of the housing policy budget will increase her direct responsibility for the result and lead to a more balanced cost-benefit picture relative to other housing policy instruments. Benchmarking CSH in this way will also trigger measures that force CSH institutions to invest loanable funds into housing loans more rapidly and thus minimize leakage. Transparent accounting will in particular avoid excessive subsidy levels, which have in the past contributed to stigmatize a potentially beneficial housing finance instrument.

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<sup>10</sup> The natural counterpart to address issues of indexation and strategies to contain the risks arising from possibly too fast loan growth or liquidity volatility will be the central banks.

<sup>11</sup> Alternatives discussed in the text for modernization loans are state programs using commercial banks and microcredit; an alternative access product to formal mortgage finance is mortgage insurance.

# Financial, fiscal and housing policy aspects of Contract Savings for Housing (CSH) in Transition Countries – the Cases of Czech Republic and Slovakia

## I. BACKGROUND

1. **Motivation of the Study and Target Audience.** The introduction of formal contractual savings for housing (CSH) products and institutions in transition countries has been highly controversial. In particular, the 1990s were characterized by a ‘war of advisors’ marketing their preferred housing finance models to transition countries as a strategy to ease the market entry of investors. A rational analysis of the advantages and disadvantages of a particular system was hardly possible in the context of positioning battles, and related calls for subsidies. Clearly the fact that CSH is conceptually a very context-specific model, which had experienced its peak relevance in different jurisdictions at different times – in the U.S. already in the 1920s<sup>12</sup>, in Germany and Austria in the 1950’s and 60’s – added to the bias of published perspective.

Beyond the politics, housing finance schemes involving pre-savings are being practiced in transition country markets, however, often in weakly regulated or unregulated form to the detriment of the consumer. In the 1990s, given high inflation and banks focussing on other sectors, new takeout finance was almost exclusively provided through installment sale and leasing arrangements with developers and other financiers that required between 20 and 50% of up-front savings by the buyer.

Due to high credit risk, even in the now developing mortgage markets lenders must be expected to continue to require high levels of equity that need to be accumulated elsewhere in the financial system. How to create access to finance for broader strata of the population without compromising fiscal stability and competition will remain an issue as access candidates to the European Union are implementing the *acquis communautaire* that sets limits to housing finance subsidies<sup>13</sup>. CSH, mortgage insurance and other access products are at the focus of this debate.

From a housing policy perspective even more important is the need to stimulate investment to modernize existing housing units, which protect the existing capital stock. Priority areas of modernization are repairs of structural damages, roofs, staircases and other common areas, the installation of new energy, water and sewer system, the implementation of energy conservation measures including new windows and isolations, as well as housing extensions and conversions. On an individual user basis, these investments require comparatively small, usually

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<sup>12</sup> Obtaining a relatively short-term mortgage loan from a U.S. S&L until the 1920’s required pre-savings of typically 5 years. See Vittas (1995) for a discussion of early savings and loan systems in the U.S. and Europe. In 1934, the creation of the public FHA mortgage insurance scheme rendered pre-savings with S&Ls obsolete, as only long-term loans (20 years) were eligible for the program. The FHA also required S&Ls to cap the maximum loan rate over the entire duration of the loan (while deposit rates were capped, too), eliminating a second advantage of CSH, reduction of interest rate risk.

<sup>13</sup> The reference here is Article 87 of the Treaty Establishing the European Community (2002), which restricts permanent subsidies by stating that only „aid having a social character, granted to individual consumers, provided that such aid is granted without discrimination related to the origin of the products concerned” shall be compatible with the common market. The other exception that is relevant for the mortgage sector is the infant industry clause referring to “aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest”. According to Article 87, a permanent and untargeted public intervention into mortgage finance must therefore be incompatible with the common market.

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uncollateralized, but still – given affordability constraints - long-term loans. CSH might present a possible financial solution for this challenge.

These are reasons to take stock of the first 10 years of implementation of CSH in the Czech Republic and Slovakia and discuss questions of system choice and implementation with a perspective on other transition countries facing similar issues.

The target audiences for the study are central banks, finance ministries and housing ministries in transition countries that focus on housing finance development.

2. **Organization of the Study.** Field meetings in Slovakia and the Czech Republic were held in April 2003 with the relevant financial policy authorities (Central Banks, Finance Ministries), housing policy makers, managers of CSH institutions, and other housing finance lenders parties. The results are presented in Sections II and III and discussed, where applicable, in the context of recent developments in Germany and Austria. Section III summarizes by developing advantages and disadvantages of CSH for transition countries from financial sector development, housing sector development and fiscal perspectives. The author finds it useful to differentiate two types of choices, concerning the product and the intermediating institution, which usually is but does not necessarily have to be a specialized monoproduct institution.

## II. SLOVAK REPUBLIC

*Population (2002):* 5.40 Million  
*GDP per capita (2002):* 199,000 SKK  
*Average monthly wage*  
*(2002):* 13.500 SKK  
*Exchange rate (4/03):* SKK 38/USD

3. **Market Structure.** There are 3 CSH institutions in the Slovak market: Prva Stavebna Sporitelna (P.S.S.), a JV of 1992 owned by Schwaebisch Hall (Volksbanken/Raiffeisenbanken Group Germany), Slovenska Sporitelna (Erste Bank Group Austria), and RZB Group (Volksbanken/Raiffeisenbanken Group Austria). The ownership structure of P.S.S. is delicate since the co-owners RZB and Erste Bank are at the same time competitors in Austria and the Czech Republic.

P.S.S. has been by far the most aggressive CSH institution, and gained a market share of 74%. According to Diamond (1998), P.S.S. was set up in 1991 even before the CSH enabling law passed.

**Table 1 CSH Institutions in the Slovak Republic**

<b>Institution</b>	<b>Licensed</b>	<b>Market Share*</b>	<b>Main Shareholders</b>
Prva (P.S.S.)	1992	74%	Schwaebisch Hall, Slovenska Sporitelna/Erste Bank, Raiffeisenbank
VUB-Wuestenrot	1993	19%	VUB-Intesa, Wuestenrot
CSOB	2000	7%	CSOB

Note: \*Total Assets as of 12/31/2002.

Although started already in 1993, a remote second in terms of market share is VUB Wuestenrot Stavebna Sporitelna, owned by VUB/Intesa and the Austrian Wuestenrot AG. Wuestenrot is managing the business with little interference from the co-owners.

CSOB Stavebna Sporitelna set up business only in 1999. It is owned by the Czech bank CSOB, of whose stock 80% is held by the KBC group of Belgium. In the Czech Republic, CSOB has a CSH joint venture with Schwaebisch Hall.

### A. Contract Types and Valuation

4. **Contract Types.** P.S.S. and Wuestenrot started in 1992/93 with the traditional fixed-spread long-term savings product. Today, CSH institutions in Slovakia offer increasingly diverse types of contracts.

Common is a minimum savings period of between 24 and 18 months, which is the statutory minimum for receiving CSH premium support, provided that the allotted proceeds are used for a housing purpose. A great majority of CSH clients that plan to borrow save only for the minimum period and receive loans from 120% (CSOB) up to 300% (P.S.S.) of the accumulated savings deposit (CSH sum ~ 100,000 SKK). To stimulate loan demand and stay competitive with

mortgage lenders, P.S.S. even has temporarily started to lend without any pre-savings requirement.

Lending rates are set slightly below mortgage market levels; the CSH institutions try to retain their spread by reducing deposit rates in parallel. As the premiums can only be withdrawn without being used for a housing purpose after 6 years, the traditional long-term savings product continues to be offered. Remaining a 'good brother', i.e. not take out loans, under the traditional contract (6% loan/3% deposit rate) is attractive, as mortgage market rates have dropped already to 5% and below. Table 2 gives examples for the CSH contracts currently in practice.

**Table 2 CSH Contract Examples, Slovak Republic**

Bank and Contract Name	Savings/ Loan Term	Savings/ Loan Rates	Maximum Loan-to-Savings Ratio	Fees	Share in New Originations
<b>P.S.S.</b>					
'Standard'	24 months*/ up to 22 years	3%/ 6%	100%	Closing fees**: 1.0% Loan fees: SKK 1,000/ 2,500*** Annual account fees: SKK 300	30%
Tariffs labelled 'C'	24 months*/ up to 22 years	2%/ 4.7%	300%	As above.	70%
<b>CSOB</b>					
'Profit'	69 months/ 16 years	3%/ 6%	100%	Closing fees: 1%** Loan fees: SKK 3,000 Annual account fees: SKK 400/600****	50%
'Credit'	18 months*/ 7 years	2%/ 4.75%	120%	Closing fees: 1.5%** Other as above.	50%

Source: P.S.S., CSOB Stavebna Sporitelna. Notes: \*Premium withdrawal prior to 69 months requires demonstration of housing purpose. \*\*Relative to contract sum. \*\*\* No lien pledged/Lien pledged. \*\*\*\*Savings/loan account.

**5. Premium and Tax Regime.** Table 3 gives an overview over the premium history as well as the attached conditions since the system's inception. As of 2003, premiums of 20% of the savings amount are paid, with a cap of SKK 4,500. The premiums are disbursed to the CSH account twice a year. The CSH pays interest on the premiums, which are capitalized and credited to savings.

These parameters are not embedded in the enabling CSH law and are subject to change annually in the respective budget law, upon recommendation of the Ministry of Finance.

The system started in 1992 with extremely generous conditions: premiums of 40% of annual savings, up to SKK 6,000, implying optimal savings of SKK 15,000, twice the monthly average wage of the time. The strategy was to render CSH contract sums large enough to cover not only modernizations, but also a large part of housing stock transaction and new construction market. Diamond (1998) estimates that, contrasting with the systems function in Germany and Austria, with the typical contract sum in the early 1990s Slovak clients could buy a moderate house.

**Table 3 Fiscal Support Conditions and Savings Yield Advantage of CSH in the Slovak Republic**

Period	1992-1997	1997-1999	2000-2003	2004
<b>Tax Preferences</b>				
Funding Lending	Tax exempt None	Tax exempt None	Tax exempt None	Tax exempt None
<b>Grants</b>				
Max. Premium p.a.	SKK 6,000	SKK 4,500	SKK 4,500	SKK 3,000
Premium as % of Savings	40%	30%	20%	15 %
Minimum Years to Premium Withdrawal, with Housing Purpose	None	2	1.5	1.5
Minimum Years to Premium Withdrawal without Housing Purpose	None	1997: not allowed 1998 bis: 6	6	6
Optimal Savings p.a.	SKK 15,000	SKK 20,000	SKK 22,500	SKK 20,000
Optimal CSH Contract Sum for Couple*	~SKK 500,000	~SKK 500,000	~SKK 600,000	~SKK 550,000
Memorandum item:		2000: 6%	2001: 5.0%	2.5%
Interest rate buy-down for mortgage loans			2002: 4.5%	
			2003: 3.5%	
			7/2003: 2.5%	
<b>Funding Rates (6 yrs)</b>				
Savings rates**	3%	3%	3%	3%
Maximum After-Tax & Premium Savings Yield	18.3%	14.6%	10.9%	9%
Ex-post Adjustment for Premium Changes***	Minus 2-4%	Minus 2-5%	Minus 1-2%	
Pre-tax Market Savings Yield (taxable)	10-12%	15-18%	5-7%	4-5%
<b>Ex-post CSH Advantage over Market Savings</b>	4-10%	Minus 3-5%	4-6%	4-5%

Source: P.S.S., CSOB Stavebna Sporitelna, VUB Wuestenrot, Ministry of Finance. Notes: \*Assuming capitalization of interest & premia, savings deposit equal to loan. \*\*Short-term savings contracts introduced 1998 with lower interest rates. Yield enhancement impact of premia exceeds estimates presented here, but total volume smaller. \*\*\*MoF has the power to adjust premium conditions for a given fiscal year for all outstanding contracts, including seasoned ones. As a result the 1997 6 yr cohort went through three premium adjustments.

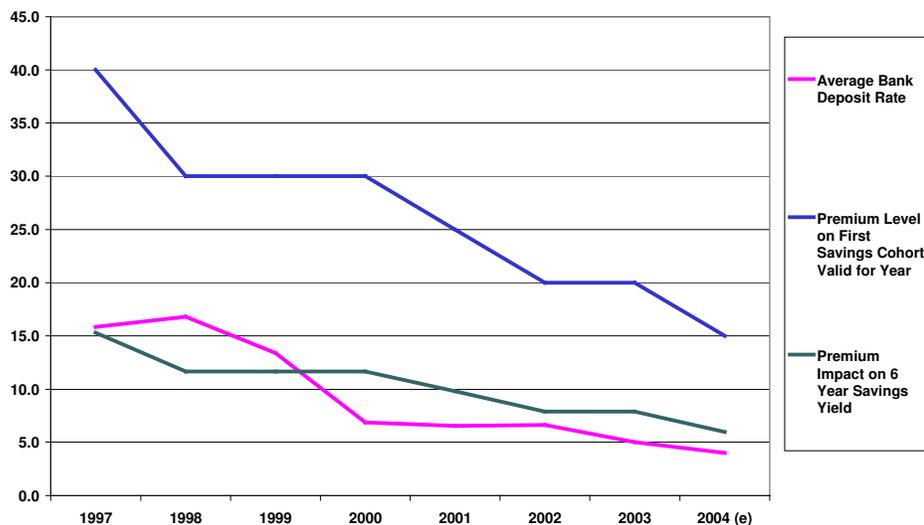
Until 1997, savers were also entitled to withdraw both savings and premiums after only one year. This resulted in high levels of withdrawals and relatively little lending. In April 1997, the incoming Meciar government closed this gap and in addition requested the premium withdrawal to be linked to a housing purpose of the loan. The decision was reversed in 1998 after new deposits had dropped by 50%; the premium level, however, remained reduced to 30% and the minimum period of six years for unconditional withdrawal became enforced. In 2001, the currently valid premium conditions were introduced.

**6. Premium-adjusted Savings Yield.** The current maximum after-tax-after-premium yield on a six year savings contract with a 3% savings rate is 10.9%, according to other calculations

(CSOB), 9.2%, down from 14.6% (CSOB 12.5%) in 2000. These conditions compare to bank deposit rates of between 5 and 7%, which are subject to 25% withholding tax.

However, an adjustment has to be made for the practice of the Ministry of Finance to cut premiums of seasoned contracts when making changes: for example, six year CSH contract originated in 1999 will have enjoyed a 30% premium in the first year, 20% premiums in the three subsequent years and 15% from 2004 on (see discussion of changes below). In Table 3 an attempt is made to capture this effect with a crudely calculated yield reduction factor. The author concludes that currently originated CSH deposits will carry a yield advantage over the savings phase of 4-6%. Figure 1 summarizes the development over time, including the proposed changes for 2004.

**Figure 1 CSH Premium History and Savings Yield Impact, 1997-2003 and 2004 Proposal, Slovak Republic**



Source: Author's calculations. NBS Bank Deposit Rates (1 yr). Note: CSH premium yield computed as average yield of six savings cohorts (years 1, 2, ..6) assuming identical savings and premium yield as in period 1, duration approx. 3 years.

Obtaining the maximum premium yield requires closing for an optimal contract sum, currently SKK 300,000 (saving plus loan plus accumulated premiums) implying an optimal savings amount per year. Higher annual savings will trigger proportionally lower returns (see Figure 5 below).

**7. Interest Option Value.** Bonuses that the CSH pay to borrowers willing to forfeit their loan option can be held as a first approximation of the loan option value. P.S.S. currently pays 1% p.a., after 6 years, as does Wuestenrot<sup>14</sup>. While these figures are static contractual parameters, they correspond to empirical loan option value estimates for CSH loans in Germany.

In a historical perspective, Slovakia has experienced high interest-rate volatility levels supporting the value of the option – see Table 4. Past lending rate peaks were well in the double-digit range. Currently, however, the option for a 6% loan is not ‘in the money’, which has triggered a

<sup>14</sup> The bonuses are a form of compensation for foregone interest income from capital market investment that CSH institutions with high liquidity surplus pay. They are periodically practiced, for instance in phases of high interest, in Germany and Austria, too.

reduction in lending rates by the institutions. Whether new volatility will arise will be largely determined by the amount of capital inflow and other factors related to the entry into the European Monetary Union (EMU), which is expected for the second half of the decade.

**Table 4 Interest Rates – Means and Volatility 1993 – 2002, Slovak Republic**

<b>Instrument</b>	<b>Deposit Rate</b>	<b>Lending Rate</b>	<b>Money Market Rate</b>
Mean	10.13	15.70	n.a.
Minimum	6.04	9.45	
Maximum	16.78	22.95	
Volatility	3.37	3.84	n.a.

Source: IMF, author's calculations. Note: volatility defined as monthly standard deviation January 1993-December 2002.

8. **Credit Option Value.** CSH in Slovakia offers households almost automatic access to long-term credit with typical loan durations of 10-20 years, including for smaller investments.

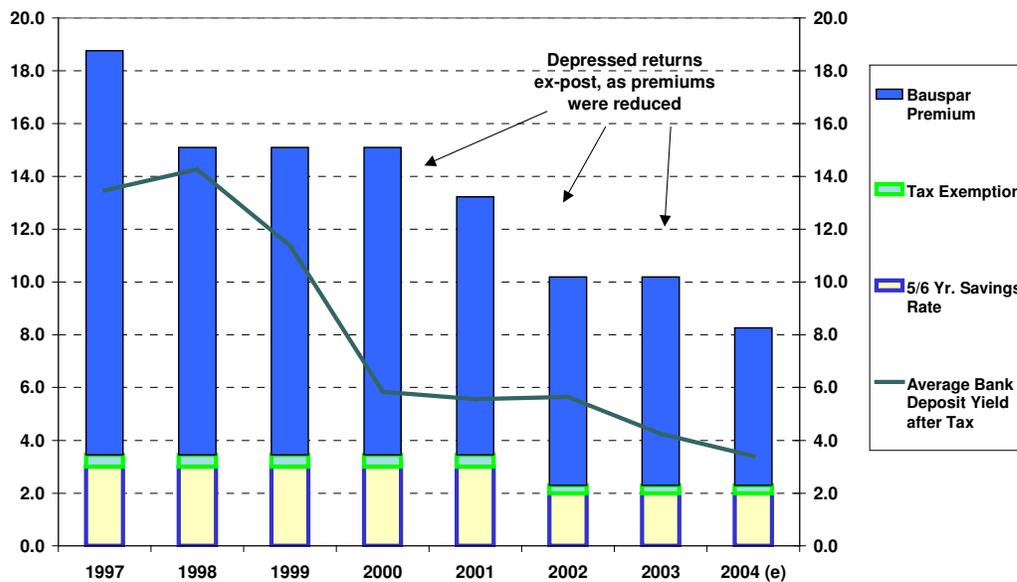
While annual account fees cut significantly into the advantage of long-term loans, the long terms are needed to match the low affordability levels of the majority of Slovak borrowers. CSH institutions have been very active lenders, related to public pressure in the end of the 1990s to originate more actively. They are underwriting clients on the basis of personal guarantees (all, except P.S.S. for smaller loans) and loan insurance (CSOB).

Loans can be used for i) purchase, ii) additions and improvements, iii) modernizations and maintenance. Improvement loans are typically used for window repairs and fixed appliances (kitchens), and thus invested into a very wide range of purposes. The Ministry of Finance monitors the compliance with the loan purpose requirements through sample surveys.

9. **Current Reform Plan.** The Ministry of Finance pursues a brush fiscal rationale in adjusting premium conditions (see below). As of January 2004, the maximum premium will be cut by one third, from SKK 4,500 tpo SKK 3,000, and the premium level will be reduced from 20% to 15%. A current practice to count commissions paid to the CSH institution as savings eligible for a premium will be discontinued. The impact of the changes is captured in Figure 2.

P.S.S. has floated a proposal to switch to the Austrian premium model, described in Annex B below, although under more favorable conditions than in Austria.

**Figure 2 Yield History of Individual CSH Savings Cohorts in the Slovak Republic, 1997 – 2003 and 2004 Changes**



Sources: Author's calculations. Notes: Typical savings rate, actual rates may differ by institution. 1997 yield only for contracts closed before April.

## B. Market

**10. Savings Demand.** Deposit demand developed stably until 1997, when disruption was created as the universal link of the premium to a housing purpose was introduced. While new deposit figures improved again after the reversal of this decision, the perception of stop-and-go of the premium policy seems to have led to stagnation tendencies of demand. Also, as a comparison to the Czech Republic shows, the yield advantages of CSH savings product in Slovakia is relatively moderate, due to relatively high alternative investment yields.

Finally, the increasing competition by mortgage lenders after 2000 introduced pressure on the CSH to offer more short-term savings contracts and higher loan-to-savings ratios, destimulating deposit collection further.

**11. Loan Demand.** Slovak CSH institutions have almost reached German or Austrian loan investment activity. The aggregate loan-to-deposit ratio is 88%, with P.S.S. almost reaching 100% (see Table 6). The figures for VUB-Wuestenrot and CSOB are 77% and 30%, recalling that CSOB started lending only in 2000.

Due to the construction of the system, lending activity started exclusively with interim loans provided at market rates. In the first institution created, P.S.S., the ratio has declined to 45.6%.

Table 5 highlights the traces that the political intermezzo of the Meciar period left in the CSH institutions loan book. It would appear that by 1997/8 any available room for interpretation of the law with respect to the loan purpose definition was used to attract new borrowers. Assisting was

that loan rates had increased drastically during the 1997/8 banking crisis, to over 20% (see Table 4), raising the attractiveness of CSH loan conditions.

**Table 5 Activities of CSH Institutions in the Slovak Republic, 1993 - 2002**

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<i>*1,000, billion SKK</i>										
<b>Activity</b>										
New Contracts	174	217	272	338	157	182	246	342	460	n.a.
Outstanding Contracts	228	425	636	902	893	844	788	867	1048	n.a.
<b>Balance Sheet</b>										
Deposits	2,431	6,710	13,137	21,968	29,720	35,727	40,067	40,652	40,762	38,761
Loans		1	57	330	2,236	9,485	21,563	29,829	33,498	34,164
... of which interim loans		1	51	249	1,920	8,362	18,389	23,412	22,731	18,144
Loan-to-Deposit Ratio		0.0%	0.4%	1.5%	7.5%	26.5%	53.8%	73.4%	82.2%	88.1%

Source: Institute for Housing, Ing. Zapletalova.

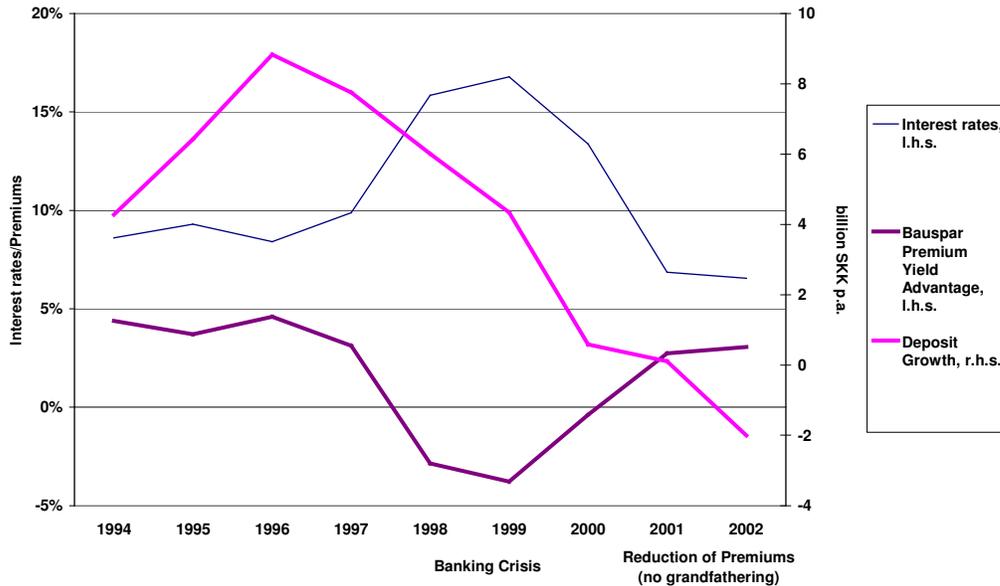
Due to strong competition by mortgage lenders, which enjoy high subsidies in Slovakia, and the increased availability of consumer lending by banks, lending growth has been decelerating since 2000.

**12. Sensitivity Analysis.** Figure 3 strenghtens the point of the impact of political risk on CSH demand. The premium incentive led to swift build-up of the deposit base. The 1997 premium policy changes reduced CSH demand and were followed by an almost doubling of interest rates, leading to a strong decline in CSH deposit growth and also their share in time deposits (see Figure 6). After 2000 deposit growth was almost zero, and in 2002 became negative, despite the fact that the pro-forma yield advantage had stabilized.

Is a stress scenario conceivable, which might lead to significant liquidity problems of Slovak CSH institutions? The central bank NBS has commissioned the Institute for Monetary Analysis with a study assessing the impact of the premium reduction planned for 2004. The results are not yet available. NBS in particular calls for greater premium stability and a reduction of political risk.

A main concern is that the already short duration of liabilities – due to the changed contract policies - may become even shorter and further raise mismatch. The author believes that current reserve levels (see below) are sufficient to manage the current premium transition without further measures, but would agree with the conclusion of NBS above.

**Figure 3 CSH Deposit Growth and Savings Yield Advantage Slovak Republic**



Source: NBS, IMF, author's calculations.

### C. Performance

Due to data constraints, the performance analysis focuses on the largest institution, P.S.S.

**13. Balance Sheet Dynamics.** Table 6 shows the development of P.S.S.' balance sheet since 1995. After a slow start, as of 2002 P.S.S. holds almost all of its deposits in client loans (loan-to-deposit ratio: 93.6%); also, the share of market rate assets – interbank loans, securities and interim loans to clients – has been significantly reduced lately. Interim finance is of less relevance than elsewhere since P.S.S. borrowers save mostly for very short periods, new interim finance essentially reflects technical waiting periods.

Remarkable is the large share of reserves in funding the balance sheet, as well as the strong increase in capital over time.

**14. Profitability.** Even according to published profitability figures, P.S.S. is one of the most profitable housing finance institutions in Europe, with a long-term average RoE of 40%. The second largest CSH institution, VUB-Wuestenrot, is far less profitable, with RoEs in the range of 5-15%. P.S.S.'s annual dividends currently equal twice the initial capital subscribed by the partners of the joint venture in 1992.

The main factor driving the earnings of P.S.S. is securities income, and more recently interest income. The strong securities income is a result of the adaptation of the fixed premium model in an inflationary context. In the extended excess liquidity period until 1998, P.S.S. was able to fetch substantial profits from investing funds obtained at 3% in the bond market at rates of 12-15% and above. The Slovak Government attempted to skim these profits, by inducing P.S.S. to purchase lower yield government bonds. P.S.S. told the author that it so far has refused to purchase mortgage bonds from 'competitors'.

Loan margins, by contrast, were initially fixed by design to 3%, but are dropping with the new contract generation due to competitive pressure. Thus, as the securities position is gradually wound down and spreads earned are much reduced, profitability can be expected to decline, too.

**15. Reserve Policies.** However, additional hidden profits in reserves will be sufficient to support profits for the remainder of the decade, if necessary. The reserve position in the P.S.S. balance amounts to over 15% of assets. Figure 4 shows how the position was built up during period of large earnings; 2001 and 2002 were the first years during which reserves were slightly reduced. In 1999 alone, of 2.3 billion earnings 1.7 billion had been deducted for reserve build-up.

NBS and tax authorities have argued that reserves, which were built from pre-tax income, should be dissolved and re-booked under a capital position, as they see little operational risk to be covered. The author agrees, except for the caveat made below, that a technical reserve built with the goal of stabilizing the impact of demand fluctuations would be advisable. Long-term reserve holdings also would reduce the duration gap that P.S.S. is currently running.

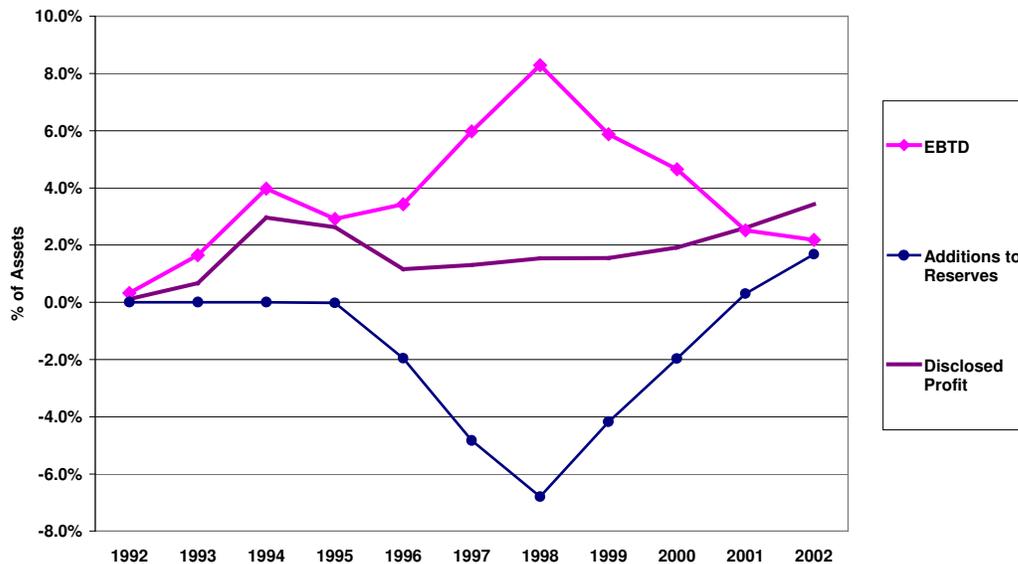
**Table 6 Balance Sheet of P.S.S. CSH Institution, Slovak Republic, 1995 - 2002**

<b>Year</b>	<b>1995</b>	<b>1997</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
<i>million SKK</i>						
<b>Assets</b>						
Securities	7336	16270	14767	11723	10492	11207
Interbank loans	3304	7091	3901	3291	2054	1449
Client loans	46	1914	17024	23584	26496	26931
<i>of which: interim loans</i>	40	1676	14734	19036	18442	12269
<i>of which: CSH Loans</i>	6	238	2290	4548	8054	14662
Total assets	12022	28374	40542	42738	42708	43809
<b>Liabilities</b>						
Deposits	10949	24456	31688	31462	30747	28776
Reserves	3	1765	5850	6692	6562	5826
Capital	830	1260	2054	2600	3413	4306
<i>of which: profit</i>	316	368	628	819	1113	1504
<b>Balance sheet analytics</b>						
Loan-to-deposit ratio	0.4%	7.8%	53.7%	75.0%	86.2%	93.6%
Interim loans to total loans	87.0%	87.6%	86.5%	80.7%	69.6%	45.6%
Market rate assets to total interest-bearing assets	99.9%	99.1%	93.6%	88.2%	79.4%	63.0%
Return on assets	2.6%	1.3%	1.5%	1.9%	2.6%	3.4%
Return on equity	57.4%	37.4%	37.1%	39.9%	42.8%	44.1%
<b>Profit-Loss % of Total Assets</b>						
Net Interest Income	0.1%	1.3%	0.8%	1.3%	2.1%	2.5%
Net Securities Income	4.5%	6.4%	7.0%	4.8%	2.3%	1.6%
Net Provision Income	1.2%	0.3%	0.2%	0.7%	0.5%	0.5%
<b>Earnings before Depreciation, Reserves &amp; Tax (EBTD)</b>						
Reserves	0.0%	-4.8%	-4.2%	-2.0%	0.3%	1.7%
Tax	-0.1%		-0.1%	-0.5%	0.0%	0.0%
<b>Profit</b>	2.6%	1.3%	1.5%	1.9%	2.6%	3.4%

Source: P.S.S., author's calculations.

Beyond technical reserves, the use of accumulated profits has been a subject of intense political debate in Slovakia. While there seems to be no formal position of Slovak government, the possibility of an outflow as profits to the foreign owners of P.S.S. seems to be met with suspicion. P.S.S. considers using the funds in order to diversify into the mortgage market; alternatives discussed are the creation of a social housing fund for the funding of rental housing repairs. One shareholder in Austria expressed the view that the funds should be used as seed capital for revolving social housing fund.

**Figure 4 P.S.S. Reserve Policy, Slovak Republic**



Source: P.S.S., author's calculations. Notes: EBT – Earnings before Taxes and Depreciation.

**16. Portfolio Risk Analysis. Interest rate risk.** P.S.S. high loan-to-deposit ratio of close to 100% comes along with an increasing duration gap. The average duration of assets is 11 years, the average duration of deposits 3-4 years, with only 50% of deposits being held over 6 years. Stronger competition with mortgage lenders will likely result in sustaining or even increasing the duration gap. P.S.S. has adopted a strategy of macro hedging the associated interest rate risks, including with counterparties in the Vienna market place. The duration gap of other CSH institutions is likely lower, because of the lower loan-to-deposit ratios.

**Credit risk.** As a result of the swift growth of the years 1997-2001, P.S.S. reports with the typical time lag rising classified loans - 2.1% in 2002 over 1.3% in 2001. Provisions are commensurate, 1.5% in 2002. Because of the increasing competition levels, classified ratios could remain high. In any event, the capital and reserve base of P.S.S. is sufficiently large to sustain even higher levels of losses. Also, despite the relaxations made in 2002 to stimulate the growth of small loans, underwriting remains reasonably conservative.

## D. Financial Sector Impact

**17. CSHs Role in the Emerging Slovakian Mortgage Market.** The 3 Slovak CSH institutions add to 9 commercial banks licensed for mortgage lending. Mortgage lending only started in 1997, and seriously took off only in 2001 with the conclusion of the banking privatization program and as mortgage rates dropped below the critical nominal threshold of 10%. New lending of mortgage lenders in 2002 was roughly half of new lending of CSH institutions, but market dynamics have changed completely, and mortgage lenders will likely be market leaders by 2004.

A third player in 2002 continued to be the National Housing Fund with 16% market share. One of the oldest institutions of its kind in transition countries, the Fund was formally abolished by January 03 upon pressure by the World Bank on closing extrabudgetary vehicles. The plan is to privatize the Fund's servicing operations. The closure will add to the market share of commercial banks.

Table 7 demonstrates that CSH institutions provided a large share of housing lending in the 1990s. Their most serious initial competitor was Slovenska Sporitelna (SLSP), the savings bank, which had funded modernizations and renovations in the mid-1990s but reduced this business towards the end of the 1990s under the pressure of the new competitors.

**Table 7 Housing Finance in Slovakia, 1995 - 2002**

Year	1995	1996	1997	1998	1999	2000	2001	2002
<i>in million SKK</i>								
<b>New housing lending</b>								
CSH	1,105	3,830	9,327	14,785	22,236	19,627	16,540	18,809
Commercial Banks**	366	1,060	406	291	440	1,450	4,387	9,283
State Housing Fund		349	1,673	3,519	1,645	3,412	3,605	5,200
Total	1,471	5,239	11,406	18,594	24,321	24,488	24,532	33,292
% of GDP	0.3%	0.8%	1.6%	2.4%	2.9%	2.7%	2.5%	3.1%
Real growth rate**		242.2%	136.8%	53.3%	44.0%	-18.1%	-21.1%	9.8%
<b>Market shares</b>								
CSH	75%	73%	82%	80%	91%	80%	67%	56%
Commercial Banks	25%	20%	4%	2%	2%	6%	18%	28%
State Housing Fund		7%	15%	19%	7%	14%	15%	16%

Sources: P.S.S., NBS, Diamond (1999). Notes: \*adjusted with GDP-deflator. \*\*1995-1998 Slovenska Sporitelna only; Diamond (1999). 1999-2002: NBS.

In order to match the increasing competitive challenge from commercial banks, P.S.S., which already pioneers higher loan amounts relative to savings, has active plans to enter the mortgage market (without pre-savings requirements). P.S.S. could use her considerable reserves to fund that expansion without taking up external finance, but is also considering placing bonds in the Vienna market place.

Beyond funding, other driving factors for a more aggressive stance of CSH institutions are distribution, servicing, and risk management.

In distribution, CSH institution's networks are largely based on franchising with free-lancing agents rather than own branches or joint distribution with banks. Distribution has been a profitability brake for VUB-Wuestenrot, which relied on distribution through own branches until 2002. The unanimous view is that joint distribution with banks is not working, as bank loans are attractively priced and management's interests differ.

P.S.S. with a market share of over 40% sees itself as the best servicer, but previous attempts to sell third-party servicing, even to its mother SLSP, have failed. The management concludes that own balance sheet expansion is a pre-requisite for continued efficient servicing operations.

In risk management, as in the Czech Republic (see below), the likelihood of successfully establishing a functioning senior-subordinate complementary lending system with CSH loans taking the subordinate position is very low for legal and institutional reasons. If the CSH market shall not remain limited to modernizations and small transactions, action on the product side is considered and – by expanding the loan-to-savings ratio – has already taken place.

**18. CSH Subsidies in the Context of Other Mortgage Finance Subsidies.** CSH premiums are a budgeted and transparent form of subsidies, which should be analyzed in the context of overall mortgage market subsidies. As Table 8 and Figure 5 show, in Slovakia currently mortgage loans are across the relevant financing volume distribution deeper subsidized than CSH loans. In addition, past practice of the Finance Ministry has been to retain mortgage market subsidies for past cohorts ('grandfathering') while cutting back CSH subsidies for existing contracts in the way described above.

By April 2003 mortgage bond funded loans enjoy a rate buy down of 3.5%, up to loan volume of SKK 2.5 million. It has been decided to cut the buy-down back to 2.5%, for loans originated from July 2003 on. For comparison: in 2002, the buy-down rate was 4.5%, in 2001 5% and in 1999 and 2000 6%.

The practice in Slovakia stands in contrast to the comparable Czech program, which operated under the assumption of a normative 'affordable' rate of 7%, only subsidized the difference to the current market rate and therefore eventually eliminated the subsidy. Slovak mortgage borrowers in turn arrive at user costs of capital of 6% and below. In addition, as in the Czech Republic mortgage bonds are fully income tax exempt, resulting in at least a 1% cost advantage. Banks are thus able to receive a spread in the range of 2-4%. Contrasting with the practice in the Czech Republic, Slovakia does not allow for mortgage interest deductibility of interest payments.

The favorable treatment of mortgage bond funding, also considering the high costs of deposit insurance and minimum reserve requirements (see below), has led to strong issuance activity, currently in the 10 year range at coupons of 5%. While this reduces the mismatch problem that might arise for universal banks funding a fast growing mortgage portfolio, permanent bond subsidies may deepen the structural problems of the instrument, including issues of its legal construction and a lack in foreign investor demand due to the yield reduction impact of the tax treatment.

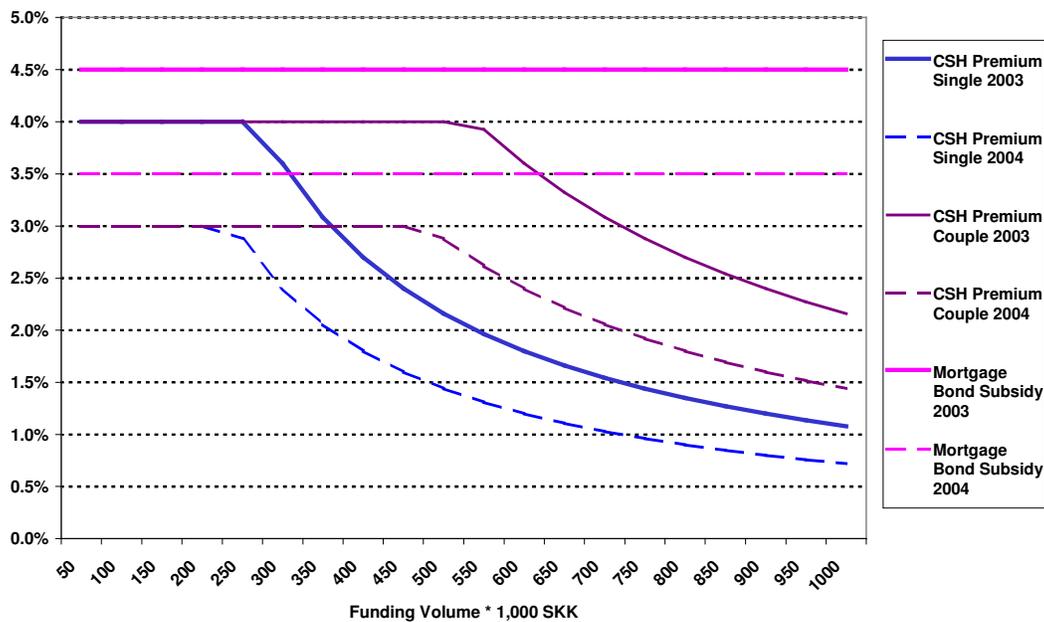
**Table 8 Funding Conditions for Fixed-rate Mortgage Finance as of Q1 2003, Slovak Republic**

Item	CSH		Mortgage Bonds	
	Item	Impact	Item	Impact
<b>Tax preferences</b>				
Funding	Yes (deduction)	0.3-0.45%	Yes (interest tax deductible)	1%*****
Lending	No		No	
<b>Grants</b>				
Funding	Yes (premium)	~ 8%	No	
Lending	No		Yes (rate buy-down)	3.5%
<b>Funding Rate/Term</b>	4.5% (av. deposit rate)		6%/10yrs	
... after tax & grant	2%/1.5yrs or 3%/6yrs		5.1%/10yrs	
<b>Lending Rate/Term</b>	4.75%/7yrs or 6%/16yrs		6.95-9.95%/5-10yrs	
... after tax & grant	4.75%/7yrs or 6%/16yrs		4.95%-6.2%/5-10yrs	
<b>Spread</b>	2.75-3%		2-4%	
<b>Fiscal Impact on Lending Rate***</b>		<0.5%		4.5%
<b>Fiscal Costs per \$ Financing Volume (single/couple)****</b>				
100,000 SKK		~4%/~4%		4.5%
300,000 SKK		~4%/~4%		4.5%
500,000 SKK		~2.2%/~3.9%		4.5%
1,000,000 SKK		~1.1%/~2.2%		4.5%

Source: author's calculations. Note: Mortgage loan preferences only apply to licensed mortgage bond issuers. \*\*Loan rate on 24 month savings contract. \*\*\*Fiscal impact on CSH lending rates: i) stabilization of savings flow reducing liquidity premium, ii) interest-rate differential on undisbursed premiums that are booked as liabilities. \*\*\*\*Assuming individual loan-to-deposit ratio of 1, results reported for one/two CSH contracts per family. \*\*\*\*\*25% withholding tax on interest payments.

Figure 5 simulates the effect of the reform steps under implementation, from July 2003 (mortgage lending) and January 2004 (CSH) on. Unless other parameters are changed, the advantages for mortgage lending will continue to exist. CSH institutions are unsurprisingly adamantly lobbying for lower mortgage bond subsidies.

**Figure 5 Mortgage Finance Support by Loan Volume and Instrument Q1 2003 and Proposals, Slovak Republic**

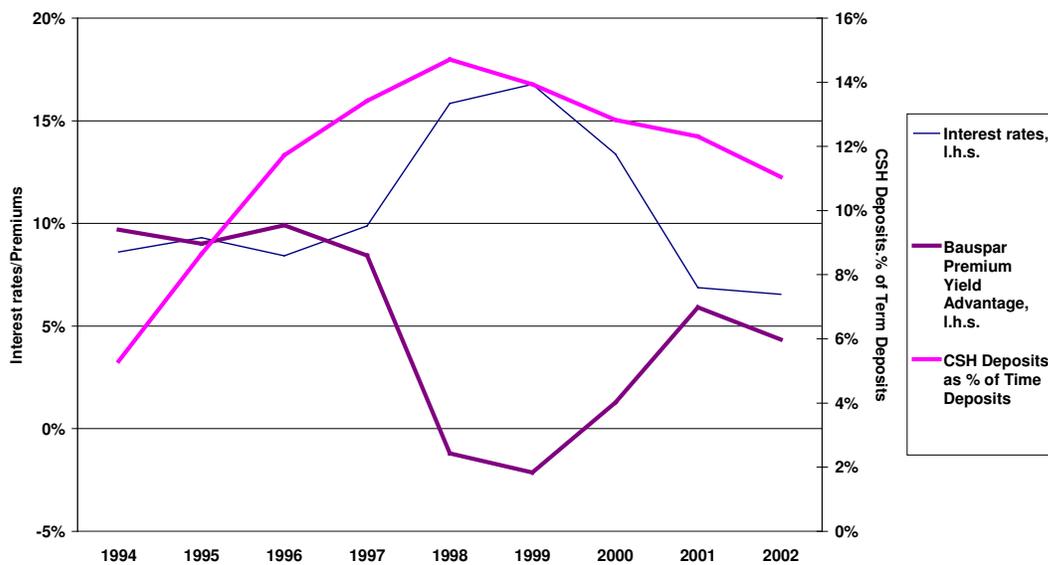


Source: NBS, MoF, author's calculations. Note: Families can accumulate CSH contracts.

The principal alternative to mortgage bond funding is deposit funding of mortgages. CSH deposits until 2002 enjoyed a 1% minimum reserve advantage over general deposits. This has been eliminated by reducing minimum reserves for deposits to now 3%, applying for both. CSH deposits continue to enjoy a preferential deposit insurance fee – 0.563% versus 0.75% for general deposits. The CSH rates will be increased to the general level by 2005, which is extremely high an international perspective and consequently likely to further stimulate mortgage bond funding.

**19. CSHs Role in Substituting other Bank Deposits (Crowding Out).** Theory predicts that the combination of relative risk premiums and relative tax and subsidy levels between bank deposits and CSH deposits will determine demand relative to other deposits. Figure 6 relates the share of CSH deposits in total domestic-currency time deposits and the underlying interest rate and premium policy factors. The substitution of bank deposits culminated in 1998 at a share of 15%. With the premium system change under the Meciar government it declined and under subsequent deposit rate and premium adjustments decreased further. It is unclear to what extent the cutbacks of premium for existing contracts have damaged future CSH demand; interview partners stressed that the impact was considerable. In assessing the peak ratio in 1998, as in the Czech Republic, the impact of the banking crisis unfolding in parallel on bank deposit demand needs to be considered. CSH deposit growth is likely to remain subdued under the current premium transition; rather than relying on deposit growth, the highly leveraged CSH institutions are planning to tap the bond market in order to retain their market position.

**Figure 6 CSH Deposits as a Percentage of Time Deposits and Determining Factors, Slovak Republic**



Source: NBS, IMF, author's calculations. Notes: Domestic currency time deposits only.

## E. Fiscal Impact

**20. Premium and Tax Preferences.** Table 9 focuses on the budgeted premium levels for CSH contracts and cannot replace a full fiscal analysis of mortgage market subsidies, which is beyond the scope of this study. CSH subsidies reached a historical peak in 1996, before demand receded as a result of the 1997 system changes. Since then, the premium level has oscillated around 1% of the state budget and 0.3% of GDP. Clearly, given the current mortgage market dynamics, mortgage subsidies could soon surpass CSH subsidies; assuming a 30 billion outstanding portfolio in 2003 carrying an average subsidy of 5% would yield fiscal costs of approx SKK 1.5 billion, half the 2002 CSH premium expenditures.

The Finance Ministry's goal is to cut back CSH subsidies by 2004 by 50%, which would mean that at current mortgage market growth rates mortgage subsidies would be significantly higher by then, possibly by 50 or 100%.

**Table 9 Fiscal Impact of CSH Subsidies in the Slovak Republic**

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Premiums in Million SKK	548	1358	1999	3253	2638	2741	2415	1939	3021	3001
Premiums in % of State Budget	0.3%	0.8%	1.2%	1.7%	1.2%	1.2%	1.1%	0.9%	1.2%	n.a.
Premiums in % of GDP	0.13%	0.28%	0.35%	0.52%	0.37%	0.35%	0.29%	0.21%	0.31%	0.28%

Source: Ministry of Finance, IMF, author's calculations.

**21. Contingent Fiscal Liabilities.** Given the high investment ratio and positive duration gap, interest rate risk is a stability issue, especially for the highly invested P.S.S. Long-term deposit demand might suffer from lower levels and erratic premium policies, and the institutions might face difficulties to tap the bond market at the right time.

The main cushion against this risk is currently the historical reserve buffer, which – in the light of reduced core profitability - should be protected by conducive measures, e.g. the introduction of a mandatory technical reserve, along the lines of the Bauspartechnischer Sicherungsfonds practiced in Germany.

Since the question of a transition of the system towards an open building society model is already raised by P.S.S. current policies, allowing CSH institutions to add to their current menu of funding options – mortgage bonds and MBS – might be a route to reduce future contingent liabilities arising from too narrow risk management choices.

**22. Premium and Tax Incidence.** Clearly, the lenient limits of CSH premiums (see Diamond (1998 for an early critique) have led in the past to a skewed distribution of the premium incidence towards households within higher income brackets. The average premium paid in 2002 was SKK 2,500, against a limit of SKK 4,500. In financial distributions, the median can be assumed to be significantly lower. However, the step to cut back the premium limit to SKK 3,000 will reduce the distributional imbalances. Also, a similar incidence analysis of mortgage market subsidies would result in a much more biased incidence: mortgage loans are affordable only for a small part of the population, and the rate buy down limit of SKK 2,5 million will exclude only the richest households from receiving significant debt service support.

## **F. Housing Sector Impact**

**23. CSH and Access to Housing Finance.** Both central bank and housing ministry stressed in interviews that CSH in the 1990s was the only functioning source of formal housing finance as interest rates were high and banks did not focus on consumer finance. The possible exception were Slovenska Sporitelna's temporary lending initiatives (see Table 7). The Central Bank estimates that only about 10-15% of the household population has access to mortgage finance in a country where 60% of households live below the poverty line. CSH lending is seen as targeting the 'middle class' in this income context.

Given the high investment ratio in loans and portfolio structure data of CSH institutions, these arguments have credibility. P.S.S. reports that 90% of their loans are sized under SKK 200,000 (US\$ 5,200), requiring a personal guaranty, and 10% are mortgage loans between SKK 200,000 and SKK 300,000. In CSOB, 20% of loans are under SKK 150,000 (guarantor or loan insurance required), 70% are larger than SKK 150,000 SKK and smaller than SKK 300,000 (guarantor *and* loan insurance required), and 10% are larger than SKK 300,000 (mortgage loans). The minimum mortgage loan size thus is larger than 90% of the CSH loans originated, leading to the conclusion that both markets are hitherto not overlapping.

Also, results are demonstrable in terms of penetration of the bankable borrower population. Until the end of 2002 approx. 200,000 loans were closed against far below 50,000 mortgage loans. The ratio of 4:1 seems to stay intact if considering 2002 figures, but is likely to drop somewhat as mortgages become currently increasingly popular.

24. **CSH Portfolio Structure and Growth.** Table 10 reports the portfolio composition of the two largest CSH institutions, P.S.S. and VUB-Wuestenrot by loan type. Clearly, modernization loans as well as secondary market transactions dominate.

**Table 10 CSH Loan Portfolio Composition, Slovak Republic**

<b>2001</b>	<b>P.S.S.</b>	<b>VUB-Wuestenrot</b>
Modernization	37.0	35.1
Transaction (housing and land)	39.9	33.1
New construction	23.0	16.2
Other	0.1	15.3

Sources: Annual reports of P.S.S. and VUB-Wuestenrot.

In interpreting the data, it should be considered that due to affordability constraints even smaller reconstruction and modernization loans are typically long-term. Approximately 40% of the P.S.S. portfolio has maturity over 5 years, 60% between 1 and 5 years.

There are no market studies available to support growth projections. P.S.S. corporate planning expects an annual growth of 10-12% for the coming 10 years. The institution expects continued focus on reconstruction and modernization due to the large latent demand and the affordability constraints of the population of new construction.

25. **Housing Stock Modernization.** No calibration of demand, i.e. need matched by both willingness- and ability-to-pay, was available for this study. P.S.S. estimates that 500,000 housing units – just under a third of the stock - would require reconstruction or substantial modernization to avoid becoming uninhabitable in the mid-term.

As the portfolio data would suggest, the CSH market share in modernization and renovation loans is considerably higher than in the total housing loan market, according to interviews above 80%<sup>15</sup>. Similarly, the large numbers of small loans would indicate that a high, but statistically unquantified ratio of modernization investment is funded with loans.

It is noteworthy in that regard that, although the Ministry of Finance monitors the loan purpose restrictions regularly through sample surveys and subsidies can potentially be re-claimed, there continue to remain grey areas of definition. In particular in condominiums and co-operative housing, apparently a large share of loans are used for non-structural modernizations, such as replacements of windows and modernization of sanitary facilities.

Much of the stock in need for modernization is moreover located in multi-family buildings, which feature the investment financing problems typical for all transition countries. Following practice in Austria, P.S.S. has started to extend loans to legal persons (housing associations, housing co-operatives). Since 1999 these are able to receive state premiums. Approx. half of these loan fund structural modernizations and half new construction<sup>16</sup>.

<sup>15</sup> The CSH institutions were not always dominant in the modernization and renovation loan market. Diamond (1999) estimate that most housing loans given by Slovenska Sporitelna (SLSP) in 1995 and 1996 were for renovation purposes, but that the surge in CSH loans crowded out SLSP lending later.

<sup>16</sup> There seems to be generally uncertainty about both the affordability and return of modernization investments into the swiftly deteriorating multi-family stock. There are 165,000 deficient large panel units alone, for which an investment volume of 90 billion SKK or 9% of 2002 GDP, has been estimated. Given the high average costs of over SKK 500,000, in a country with sufficient land reserves and changing consumer attitudes some of the stock should be demolished rather than modernized.

**26. Housing Stock Transactions and New Construction.** Anecdotal evidence by interlocutors suggests that used flats costs approx. ~ 1.5 ml to 2.5 mln SKK in Bratislava, and in mid-sized cities SKK 300,000 - 500,000. In mid-sized cities, combining several CSH loans with other family equity should therefore suffice to buy an apartment. Also, progressive housing construction – with self-help by friends and family on an own piece of land -, or the acquisition of land are financing targets for CSH loans.

The reported annual new construction number is approx. 10,000 p.a. (average 1997-2001). According to an own estimate this translates into annual investments of SKK 15 billion. Of this figure, SKK 12-13 billion should accrue to the private sector; at the same time CSH institutions fund approx. 4 billion SKK of new construction loans, i.e. around third of the total.

Clearly, the private housing market is difficult to tap by the CSH due to their product constraints and the decline in mortgage market rates. P.S.S. also believes that many high-income households have invested already in the past 10 years, which would suggest a declining new construction volume.

**27. CSH Subsidies and the Housing Policy Budget.** CSH benefits and the monitoring of their use fall under both jurisdiction and budget responsibility of the Ministry of Finance, and not of the Ministry of Construction that is the de-jure responsible entity for housing policy. As a result, CSH is neither conceptually nor in terms of empirical results treated as part of the housing policy instrument set.

An official 2002 document<sup>17</sup> reviews current housing finance programs and some implicit support measures (such as property, property sales and income tax exemptions), but does not provide a comprehensive overview of budgeted expenditures and the budget equivalents of tax exemptions and guarantees that together constitute total fiscal costs. The share of CSH subsidies can therefore not be determined without further analysis that is beyond the scope of this paper.

In 2001, the two main *budgeted* programs were appropriations to the State Housing Development Fund and CSH premiums. With 3 billion SKK each, both large programs were of the same size, while tax exemptions can be deemed to have had little significance. The interest rate buy-down for mortgages was budgeted at 450 million SKK. Two smaller programs allocated grants and guarantees to municipalities for new construction. As of 2004, CSH will be by the largest budgeted position followed by budgeted mortgage loan buy-downs; however, non-budgeted tax exemptions for mortgage bonds are likely to gain size very swiftly.

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Presentation to the OECD Conference on Housing Finance in Transition, Warsaw, December 2002. Download from [www.oecd.org](http://www.oecd.org)

### III. CZECH REPUBLIC

Population (2002): 10,29 Million

GDP per capita (2001): 210,000 CZK

Average monthly

net income<sup>18</sup> (2000): 20,322 CZK

Exchange rate (4/03): CZK 31/USD

28. **Market Structure.** There are 6 CSH institutions in the Czech Republic of which 5 are affiliated to universal banking groups: Ceskoslovenska Obchodni Banka (CSOB), Ceska Sporitelna (CS), Komerčni Banka (KB), Raiffeisenbank (RB) and Bank Austria Creditanstalt (BACA). All these banks own in parallel licenses for mortgage banking, and by implication mortgage bond issuance, attached to the mother bank. Wuestenrot is the oldest CSH institution and the only one operating as a pure mortgage market specialist; it has recently received a license for mortgage banking, too.

**Table 11 CSH Institutions in the Czech Republic**

<b>Institution</b>	<b>Market Share*</b>	<b>Main Shareholders</b>
CSOB (CMSS)	35.2%	CSOB, Schwaebisch Hall
Ceska Sporitelna (CSST)	21.5%	CS, Erste Bank
Vseobecna (VSS KB)	19.5%	BHW, Komerčni Banka, Ceska pojistovna
Raiffeisen	10.4%	Raiffeisen Bausparkasse, Raiffeisenbank
Wuestenrot	7.4%	Wuestenrot & Wuerttembergische, Wuestenrot Salzburg
Hypo	6.0%	HVB Bank, Vereinsbank Victoria Bausparkasse

Note: \*Total Assets as of 12/31/2001.

#### A. Contract Types & Valuation

29. **Contract types.** Czech CSH institutions offer savings contracts with a minimum savings period of 2 years and a maximum loan-to-savings relationship of 120%. A large majority of savers do not borrow and withdraw or roll over funds after the minimum savings period required for unconditional withdrawal (5 years). Given that savings over 40% of the contract sum are required as a minimum, borrowers will receive an interim finance loan priced at market conditions in order to bridge the time period before allotment of the CSH loan.

Contract conditions differ primarily in the combination of deposit and lending rates, as well as the fee structure. In order to remain competitive in the lending market where mortgage rates are available at 5%, Wuestenrot, for example, offers an alternative contract with lower deposit and loan rates. Good brothers who save only and do not borrow will self-select to the contract with higher deposit rates. Both carry the same spread. Since most closings are currently with good brothers, fees are collected up-front and not upon loan takeout.

<sup>18</sup> Households with employed household members.

**Table 12 CSH Contract Examples, Czech Republic**

Bank and Contract Name	Savings/ Loan Term	Savings/ Loan Rates	Maximum Loan-to-Savings Ratio	Fees	Share in New Originations
<b>CMSS</b>					
Klasik	24 months*/ 10.4 - 13.8 yrs	3.0%**/5.5%	120%	Closing fees: 1%*** Annual account fees: n.a.	n.a.
Invest	24 months*/ 10.4 - 13.8 yrs	2.0%**/4.8%	120%	As above.	n.a.
<b>Wuestenrot</b>					
	24 months*/ 8.5-11.3 yrs	1.5%**/4.4%	120%	Closing fees: 1% Annual account fees: 200 CZK	n.a.
	24 months*/ 8.5-11.3 yrs	2.5%**/5.3%	120%	As above.	n.a.

Source: CMSS, CSST. Notes: \*Statutory minimum \*\*Bonus paid to non-borrowers after 5-7 years. \*\*\*Relative to contract sum.

**30. Premium and Tax Regime.** In contrast to practice in Slovakia, where the premium level is defined in the annual budget law, and Germany, where a separate act governing housing savings subsidies exists, the state premium level in the Czech Republic is determined by the enabling law. This construction makes it harder to change, so the premium level has remained unchanged and constant over 10 years, since 1992. The premium is 25% of annual savings; premiums are paid up to CZK 4,500 p.a. Multiple contracts per family are possible, as is roll-over of the unexploited difference between the premium maximum and the actually paid premium to the following year(s). The CSH institution collects and capitalizes the premiums on behalf of the client, i.e. interest on premiums is paid. The minimum time period necessary to withdraw the accumulated deposit with the state premium unconditionally is 5 years. Premiums can be withdrawn after 2 years, however, provided that the funds are used for housing purposes, regardless of whether a loan is taken out.

**31. Premium-adjusted Savings Yield.** The maximum after-tax-after-subsidy yield of the 5-year savings contract with a 3% savings rate is equivalent to a 12.3% market investment. This compares to market deposit rates of about 2%, which are still subject to a withholding tax of 15%. As a result, CSH contracts have a yield advantage in the savings phase, including the tax effect, of over 10%. Even if lower CSH deposit rates are chosen to obtain cheaper loans, the yield advantage remains over 9%.

Obtaining the maximum yield requires a contract sum of not over CZK 350,000 (saving plus loan plus accumulated premiums). Higher savings will trigger proportionally lower returns (see Figure 9 below). Figure 6 demonstrates how the fact that premium levels have not been adjusted to changing capital market conditions have created an increasing yield gap of CSH deposits over bank deposits.

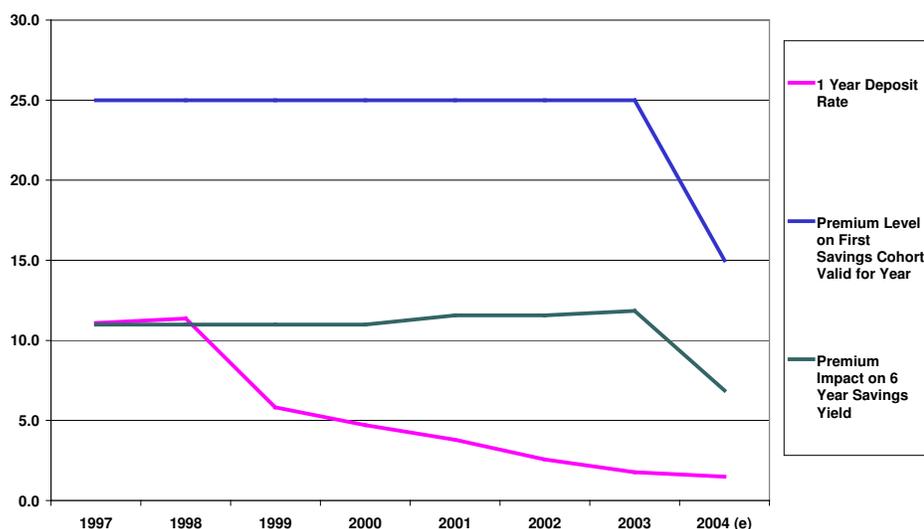
A graph demonstrating the impact of an alternative – non-constant premium formulation, as it is practiced in Austria since 1997 – is presented in the Annex.

**Table 13 Fiscal Support Conditions and Savings Yield Advantage of CSH in the Czech Republic**

<b>Period</b>	<b>1993-2003</b>	<b>2004 Proposal</b>
<b>Tax Preferences</b>		
	Funding Tax exempt Lending Tax-deductible	15% Withholding Tax Tax-deductible
<b>Grants</b>		
Max. Premium p.a.	CZK 4,500	CZK 3,000
Premium as % of Savings	25%	15 %
Minimum Years to Premium	2 years	2 years
Withdrawal, with Housing Purpose		
Minimum Years to Premium	5 years	6 years
Withdrawal without Housing Purpose		
Optimal Savings p.a.	CZK 25,000	CZK 20,000
Roll-over of unused premium to next year ?	Possible	Not possible
Minimum age of children savers?	None	15 years
Optimal CSH Contract Sum for Couple*	~ CZK 350,000	~CZK 330,000
Memorandum item: Interest rate buy-down for mortgage loans	1995 bis: 5 yr mortgage rate minus 7%; e.g., in 2002: 1%, 2003: 0%.	Abolished
<b>Funding Rates (6 yrs)</b>		
Savings rates**	3%, reduced after 2001, by 2003: 1.5%-2%.	1.2%-1.5%
After-Tax & Premium Savings Yield	10.67% (12.3% if taxed)	5.96% (6.85% if taxed)
Pre-tax Market Savings Yield (taxable)	Max: 1998, 8.5% (taxed) Min: 2003, 2% (taxed)	2004: 1-2%
<b>Ex-post CSH Advantage over Market Savings</b>	3.8-10.3%	6-7%

Source: CSH Trade Association, Ministry of Finance. Notes: \*Assuming capitalization of interest & premia, savings deposit equal to loan. \*\*Short-term savings contracts introduced 1998 with lower interest rates. Yield enhancement impact of premia exceeds estimates presented here, but total volume smaller.

**Figure 7 CSH Premium History and Savings Yield Impact, 1997-2003 and 2004 Proposal, Czech Republic**



Source: Author's calculations based on CNB data. Note: CSH premium yield computed as average yield of six savings cohorts (years 1, 2, ..6) assuming identical savings and premium yield as in period 1, duration approx. 3 years.

**32. Interest Option Value.** Bonuses paid to savers who do not borrow could serve as a first approximation to the value of that loan option; Wuestenrot, for example, pays a 25%, 30% or 40% savings bonus depending on the duration of savings (5, 6, or 7 years), resulting in a 3-4% annual yield enhancement. This approach, however, does not reflect changes in capital market conditions: as of 2003, the loan option for many seasoned CSH contracts is no longer 'in the money', as alternative mortgage financing is available at comparable or even lower rates (see Table 19).

Table 14 below reviews the historical interest rate risk situation in the Czech Republic. Interrupted by the banking crisis spell at the end of the 1990s, interest rates have been declining and volatility has been relatively low. However, interest rates may have reached a cyclical trough in 2003, and new volatility might arise from international capital flows, depending on the exchange rate policy and the speed of transition into the EMU (expected for about 2007). The interest rate option may therefore gain in value again.

**Table 14 Interest Rates – Means and Volatility 1993 – 2002, Czech Republic**

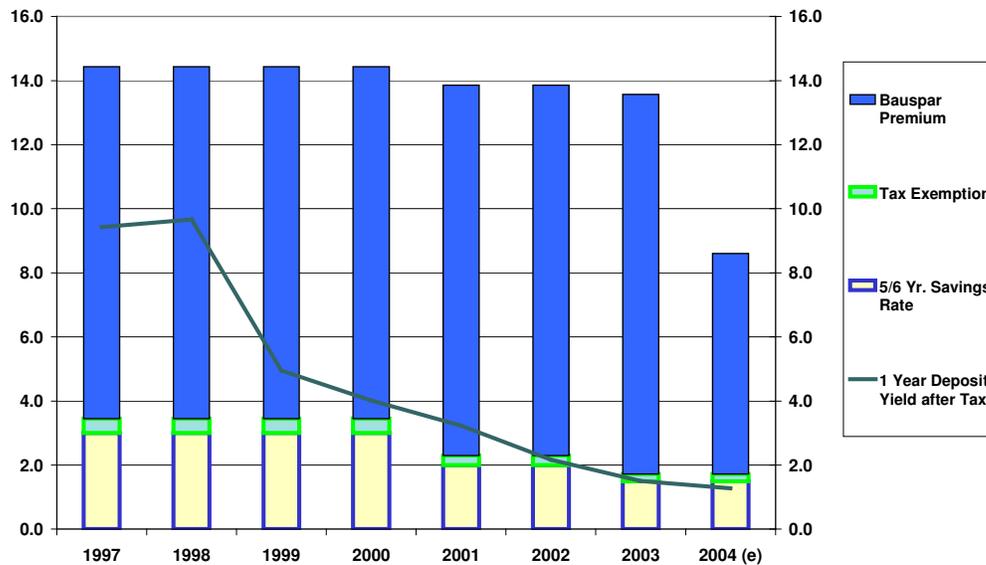
Instrument	Deposit Rate	Lending Rate	Money Market Rate
Mean	5.70	10.81	9.65
Maximum	8.47	14.34	25.99
Minimum	2.06	6.06	2.63
Volatility	2.10	2.97	4.47

Source: IMF, author's calculations. Note: volatility defined as monthly standard deviation January 1993-December 2002.

**33. Credit Option Value.** Based on savers characteristics, there is de facto no selection as more than every second Czech person and almost every household has a CSH contract. This popularity of CSH – as positive as it is for liquidity - limits the screening qualities of the system. In

combination with the absence of individual credit risk pricing, the net value of the contract is particularly high for risky borrowers, generating the risk of adverse selection. CSH institutions are therefore individually underwriting every customer on the basis of credit standing, which is slowing down loan growth. An additional underwriting requirement is a personal guarantee, and for loan volumes over CZK 200,000 the pledging of real estate collateral. Credit risk data is reported below.

**Figure 8 Yield History of CSH Savings in the Czech Republic, 1997 – 2003 and 2004 Proposal**



Sources: Author's calculations. Notes: Typical savings rate, actual rates may differ by institution. 15% withholding tax. CSH premium yield calculations as above.

**34. Current Reform Plan.** The strong misalignment between premium levels and capital market rates became obvious by early 1999, but was no earlier discussed within the government than late 2001, upon the initiative of the Central Bank. As of summer 2003, a proposal by the Finance Ministry for a change of the enabling law is on the table, which would become effective by January 2004. The proposal is highly controversially discussed in Parliament, and its success is uncertain. The impact of this classical policy lag on relative savings yields is impressively demonstrated in Figures 8 and 9.

The current proposal has been negotiated between Ministry of Finance and CSH institutions and envisages a reduction of the premium to 15% associated with an extension of the minimum savings period for unconditional premium withdrawal to 6 years. The maximum premium payable will be reduced from CZK 4,500 to CZK 3,000. In order to curtail the current high level of 'double-dipping', i.e. multiple contracts per family, premiums will be limited to contracts for children at age above 15 years. Also, the option to transfer savings between different years in order to exploit the maximum premium payment shall be eliminated.

The result of the parameter changes, if implemented, would be modest if compared to the yield gap that must be closed (see Figure 8). The premium yield would drop from 9.2% to about 4.75%, implying a market rate investment of 6.85%. Also, current premium levels would be kept

for seasoned contracts. Unsurprisingly, the public debate about reform has led to a strong demand increase in anticipation of the cuts (see Figure 9).

A possible more far-reaching transition to the Austrian premium model, described in the Annex, was brought into discussion by Austrian-managed CSST (Ceska Sporitelna), but is currently not actively lobbied for by the trade association. The reasons seem to be that premiums are much lower in Austria, currently 4.5%, leading to an undesirable outcome from the perspective of the CSH institutions, and that the model is not fully accepted by the other institutions, which are used to the fixed premium formulation.

## B. Market

35. **Savings Demand.** Figure 9 relates CSH deposit growth to the development of premium incentives. The steady nominal premium policy resulted in volatile demand conditions due to the fluctuations of the yield advantage. Noticeable are the impact of the banking crisis of 1997/8 that was associated with strong rate increase and an associated drop in demand, as well as the strong increase in demand since 1999 which one market participant labelled a 'second starting phase' of the system.

**Figure 9 CSH Deposit Growth and Pricing Conditions**



Sources: CNB, IMF, author's calculations.

36. **Loan Demand.** Table 15 below relates the deposit and lending activity. As of 2002, the loan-to-deposit ratio is still only 28%, providing a striking contrast to the Slovak figures. The good-bad brother relationship is 6:1, implying that the typical client interprets CSH as a savings rather than a loan product. The mirror effect is that two thirds of prospective borrowers request their loans immediately and take up an interim loan which still make up half of total client lending 9 years after system inception.

A number of factors depress CSH loan demand: the institutions quote a restrictive practice of loan purpose definition by the Ministry of Finance as well as a general aversion to indebtedness. Distribution is a relevant factor, too - at current interest rate levels, CSH loans are hardly marketed by the mother banks willing to sell their own products. In fact, there is evidence (CMSS) that mothers will rather cannibalize CSH portfolio by inducing borrowers to prepay CSH loans and refinance into mortgage loans. While prepayment is not possible in the case of interim finance loans, it generally is in the case of CSH loans.

As will be further discussed below, an additional constraining factor is the delay in creating a complementary funding structure with CSH loans as second mortgage ranked behind mortgage loans. Modernization loan demand thus remains the core market for the CSH institutions.

**Table 15 Activities of CSH Institutions in the Czech Republic, 1995 - 2002**

Year	1995	1996	1997	1998	1999	2000	2001	2002
<i>*1,000, billion CZK</i>								
<b>Activity</b>								
New Contracts*	454	620	580	710	990	1230	1520	1630
Outstanding Contracts		1610	1980	2440	2970	3690	4540	4870
<b>Balance Sheet</b>								
Deposits	16.3	34.5	59.6	81.7	93.6	110.4	133.3	180.2
Loans		1.3	5.9	17.6	26.3	31.0	37.0	51.6**
of which interim loans		1.1	5.2	14.9	17.9	16.8	18.5	24.4
Loan-to-Deposit Ratio		3.8%	9.9%	21.5%	28.1%	28.1%	27.8%	27.7%**

Source: Trade Association of CSH Institutions, MoF. Notes: \*includes increases of contract sum. \*\*CNB data

**37. Sensitivity Analysis.** Figure 9 would suggest a high elasticity of CSH contract demand relative to changes in the premium yield, rather than to changes in the credit market environment. Against this background, how drastically would the proposed adjustments in premiums affect demand? Clearly, so far the consistently low loan-to-deposit ratio is mirrored by extreme liquidity levels of 70% and higher, which creates a buffer against adverse demand developments. The run on new contracts in 2002/2003 in anticipation of possible cuts added to that buffer. CMSS estimates that after the premium adjustment, 550-750.000 new contracts would be closed in 2004, down from 1.5 million in 2002 and 2003. This would match experiences in Slovakia, Germany and Austria with premium adjustment, but would not pose any liquidity problem in the short run.

More difficult could be the mid-term, when the new deposits of 2002/2003 become due for possible loan allotment. After 2007/8, the likely date of EMU access, liquidity stress might occur, especially, if subsidies are cut down further as it has to be expected. A possible stress scenario would entail a strong interest rate increase, triggering a higher borrower-saver ratio of the strong savings cohorts.

## C. Performance

**38. Balance Sheet Dynamics.** Table 16 shows the main balance sheet items if aggregating all CSH institutions. The data are unconsolidated, but consolidation adjustments are likely to be minor. CSH institutions hold 2/3 of their assets in interbank loans and securities, especially tax-exempt mortgage bonds. In combination with the high interim finance share in client loans, the ratio of market interest rate bearing assets to total interest-bearing assets is 85% - at the same time 90% of liabilities are bearing low interest rates. The surge in demand due to the premium

misalignment has led to a stagnating loan-to-deposit ratio in the past four years. Total assets grew in 2002 alone by 25%.

Because of the dominance of long-term savings contracts, a large amount of undisbursed state premiums are booked as liabilities.

39. **Profitability.** With disclosed RoEs between 10 and 58%, CSH institutions have been extremely profitable over the past six years. The main drivers of profitability are net interest margin from lending and securities income; in some years – especially during the late 1990s, which were characterized by high volatility – trading income was also considerable. Margins are currently declining swiftly, as the gap between market lending rates and CSH rates has closed in 2002 and even become negative in early 2003. By April 2003, the typical alternative investment yield is 2.4%, which approximately matches average cost of funds.

**Table 16 Aggregate Balance Sheets of CSH Institutions in the Czech Republic, 1995 - 2002**

<b>Year</b>	<b>1995</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002*</b>
<i>*million CZK</i>							
<b>Assets</b>							
Securities	3742	12504	15572	23320	32036	48837	n.a.
Interbank loans	14526	35142	47865	45159	50600	51505	n.a.
Client loans	95	7523	18368	26606	31007	38692	51583
<i>Of which: Interim loans**</i>		5200	14900	17900	16800	18500	24400
<i>of which: CSH Loans**</i>		700	2700	8400	14200	18500	21900
Total assets	20803	68772	98889	111908	130143	159178	205314
<b>Liabilities</b>							
Deposits	17154	60569	85554	96550	113390	136440	185922
Reserves	46	514	1092	1451	1361	1354	n.a.
Capital	3138	5196	7742	8567	8557	9103	n.a.
<i>of which: Profit</i>	97	1654	3002	1658	873	1216	n.a.
<b>Balance sheet analysis</b>							
Loan-to-deposit ratio	0.6%	12.4%	21.5%	27.6%	27.3%	28.4%	27.7%
Interim loans to total loans		69.1%	81.1%	67.3%	54.2%	47.8%	47.3%
Market rate assets to total interest-bearing assets		95.8%	95.8%	90.8%	87.5%	85.5%	n.a.
Return on assets	1.1%	4.1%	4.37%	1.68%	0.78%	0.93%	0.92%
Return on equity	4.6%	44.6%	57.8%	21.4%	10.2%	14.2%	19.7%
<b>Profit-Loss</b>							
<b>% of Total Assets</b>							
Net Interest Income	4.1%	4.0%	5.1%	2.5%	1.4%	0.8%	n.a.
Net Securities Income	0.1%	1.7%	2.1%	2.0%	1.2%	1.3%	n.a.
Net Provision Income	2.0%	0.8%	0.4%	0.1%	0.3%	0.4%	n.a.
Earnings bef. Depreciation, Reserves & Tax (EBTD)	7.0%	10.3%	12.4%	6.6%	3.7%	3.2%	n.a.
Reserves	n.a.						
Tax	n.a.						
Profit	6.6%	9.3%	3.0%	5.2%	2.4%	2.3%	n.a.

Source: Trade Association of CSH Institutions, author's calculations. Notes: Unconsolidated, \*Source for 2002 data: Central Bank. \*\*Loan decomposition data by Trade Association of CSH Institutions.

No information was available on corporate income tax payments of the institutions; however, a large portion of securities income - mortgage bonds - is tax-exempt. Usually mortgage bonds are bought from the mother bank of the same group. Some CSH currently do not pay income tax at all.

Depreciation is rather low, although non-performing loans are increasing. While Table 17 reveals that these figure are small in comparison to banks, which are still saddled with past corporate debt defaults, managers of CSH institutions express concern about the increase.

**40. Reserve Policies.** Against the background of so far limited depreciation and tax payments, a comparison of earnings and disclosed profit data suggests considerable undisclosed profits hidden in reserves. How these profits were precisely booked is not quite clear - some institutions seem to have created considerable voluntary reserves, which are now, however, upon pressure from tax authorities and accountants to be dismantled. There is currently no requirement for technical reserves that serve to counter demand fluctuations (in Germany: *bauspartechnischer Sicherungsfonds*) and pension and other reserves are low. It is likely that – as in the Slovak case - reserves will be gradually unearthed as profits, and subsequently returned to shareholders as dividends.

**Table 17 Performance of Banks and CSH Institutions in the Czech Republic, 1996 - 2002**

In %		1996	1997	1998	1999	2000	2001	2002
NIM	Banks	4.3	4.3	4.6	4.2	3.6	3.8	3.7
	CSH	8.2	8.4	9.4	5.2	3.4	3.0	2.7
Non-perf.	Banks	21.38	20.51	20.43	21.97	19.90	13.73	8.80
Loans	CSH	1.25	0.93	0.90	0.89	1.25	1.54	1.77
ROE	Banks	12.6	-1.2	-5.7	-4.3	13.1	14.4	22.1
	CSH	19.4	45.3	64.1	27.0	11.4	15.5	19.7
LtA	Banks	44.4	44.3	35.6	38.3	35.9	36.9	35.9
	CSH	2.5	11.7	18.2	24.1	23.8	25.0	25.2

Source: CNB. Notes: NIM – Net Interest Margin, ROE – Return on Equity (Tier 1), LtA – Loan-to-Asset Ratio.

**41. Portfolio Risk Analysis.** *Interest rate risk.* Czech CSH institutions are closer matched-funded than their counterparts in Slovakia; however, individual approaches increasingly differ. Austrian managed CSST, for example, is likely to follow in mid-term the route of her Vienna-based sister, S-Bausparkasse, which is issuing bonds and MBS. In the entire system there is currently considerable risk of negative maturity transformation resulting from shorter asset durations, as it materialized in Austria in 1999 when CSH institutions faced a combination of high deposit influx and prepayments of CSH loans in combination with low alternative investment yields. It is likely that those institutions that did not adjust their deposit rates downward in time are temporarily facing negative margins; however, reserves should be sufficient to absorb any losses, and marginal cost of funds have been declining in all institutions to restore profitability.

*Credit risk* Credit risk charges were initially very low. They are rising since 2000/1, curbing hopes for stronger loan growth to close the loan-to-deposit gap. At least one lender reached a 6% classified loan ratio in 2002<sup>19</sup>, of which 1% has been provisioned. A second lender - with a considerably lower loan-to-deposit ratio than the first one - reports a classified ratio of only 2.6%.

<sup>19</sup> Including loans in 'watch' category.

The average is reported to be in the range of 3-4%<sup>20</sup>. The institutions quote fraud as a main contributing factor, followed by unemployment and income instability. Clearly, due to the success of deposits the customer base is very large while the level of financial information is very weak. Together with the diminishing rate advantage over mortgage lenders this favors adverse selection. As a result, the institutions apply relatively strict formal underwriting criteria (personal standing, personal guarantees). By 2004, CSST plans to be the first institution to start with scoring clients.

There are also unsolved legal problems affecting loan recovery: mortgage banks do enjoy automatic first-rank mortgage as a result of strategy of introduction of the mortgage bond law while CSH institutions are secured as other creditors *pari passu*. The CSH institutions currently negotiate legal options to improve their position with the mortgage banks.

#### D. Financial Sector Impact

**42. CSHs Role in the Emerging Czech Mortgage Market.** 6 CSH institutions add to 9 banks licensed for mortgage lending, which as in Slovakia requires additional capital. Table 18 gives overview over the relative dynamics of outstandings. Time series figures on new lending, which would let the financing role of CSH appear more realistic, were not available. As of 2002, new lending through both the mortgage and CSH channel were roughly the same, each 22 billion CZK, but CSHs originated six times the number of loans.

A third lender established by law in 2000 is the State Housing Development Fund, which, upon pressure of World Bank and IMF in the context of rationalization of public expenditures is likely to close again in 2005. The Ministry of Regional Development plans to channel the programs run by the SHDF through the national development bank, *Českomoravská Zárúční a Rozvojová Banka (CMZRB)* which also handles rate the mortgage rate buy-down and other programs.

**Table 18 Housing Finance in the Czech Republic, 1996 - 2002**

Year	1996	1997	1998	1999	2000	2001	2002
<i>in million CZK</i>							
<b>Outstanding Housing Loans</b>							
CSH	1300	5900	17600	26300	31000	37000	51583
Commercial Banks	2268	8044	13021	19488	28963	43691	66224
State Housing Fund**					761	4085	6695
Total	20636	34650	31389	46094	60731	86468	124502
% of GDP*	1.32%	2.06%	1.71%	2.42%	3.06%	4.01%	5.47%
Real Growth Rate***		282.3%	108.9%	48.4%	27.9%	37.7%	42.2%
<b>Market shares</b>							
CSH	36.4%	42.3%	57.5%	57.7%	51.1%	44.7%	41.4%
Commercial Banks	63.6%	57.7%	42.5%	42.3%	47.7%	50.5%	53.2%
State Housing Fund					1.3%	4.7%	5.4%

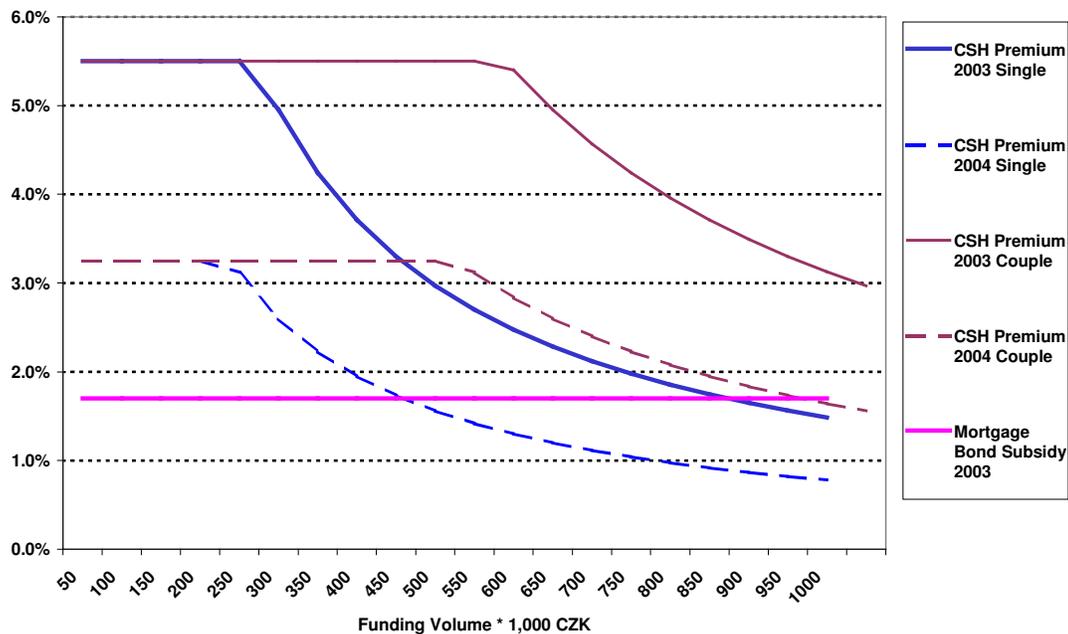
Sources: CNB, Trade Association of CSH Institutions, Ministry for Regional Development. Notes: \*2002 estimate. \*\*SHDF Data reflect budget appropriations, Source: MMR \*\*\*Adjusted with consumer price index.

<sup>20</sup> At the time of writing, the author had access to two (out of six) 2002 annual reports.

The data in Table 18 reveal that CSH had their largest market share during the banking crisis, that hit the Czech Republic in 1997. The mortgage market started to take off only around 2000, when interest rates dropped below 8%, and was given a further boost with the privatization of Ceska Sporitelna (CS) to Erste Bank, which was finalized by the end of 2001. It is important to note the role of interest rate decline – although subsidized by a government rate-buy down program to 7%, higher headline rates were not accepted by borrowers, possibly due to perception of political and inflation risk. Also, the privatization of CS coincided with strategic decisions in a number of banks to refocus their business on the consumer finance market, and here in particular mortgage finance.

There are two specific barriers for Czech CSH institutions against gaining again higher market share, one is related to distribution and the other to risk management. Given their adverse selection problem, CSH institutions face competition problems due to long underwriting time - they need about 1 week, a bank 1-2 days. Also, joint marketing and distribution through the mother bank is unlikely to improve even if bank loans loose in attractiveness, because of institutional problems. From a risk management perspective, as in Slovakia it is very unlikely that the complementary ('piggy-back') funding mechanism with mortgage lending will emerge, as practiced in Germany. Even if the automatic first rank monopoly that mortgage lenders enjoy can be broken up, it is likely that CSH institutions would prefer pari passu lending over second mortgage lending, due to remaining legal uncertainties.

**Figure 10 Mortgage Finance Support by Loan Volume and Instrument Q1 2003 and Proposals, Czech Republic**



Source: CNB, MoF, author's calculations.

43. **CSH Subsidies in the Context of Other Mortgage Finance Subsidies.** As in Slovakia, CSH subsidies should be analyzed in the context of mortgage market subsidies. Contrary to Slovakia, as a result of the premium misalignment, the subsidy structure in the Czech Republic creates a bias in favor of CSH over a large range of the financing volume distribution (see Table

19 and Figure 10). Figure 10 shows that the pending proposals for 2004 would bring relative subsidies much closer in line with each other.

As of 2003, mortgage lending is primarily supported by the income tax exemption for mortgage bonds, which results in a yield reduction of perhaps 0.7%. The mortgage rate buy down subsidy – still in 2000 3% and in 2002 1% - has been reduced to zero. While a revival of the program with a lower affordable rate is being discussed, a strengthening of the ongoing rate buy down program for young households, which currently continue to receive support for purchasing stock apartments (rate buy-down of 3% in 2002, 2% in 2003), would be more effective.

**Table 19 Funding Conditions for Fixed-rate Mortgage Finance as of Q1 2003, Czech Republic**

Item	CSH		Mortgage Bonds*	
	Item	Impact	Item	Impact
<b>Tax preferences</b>				
Funding	Yes	0.8%	Yes (interest tax deductible)	0.7%****
Lending	Yes	1%	Yes	1%
<b>Grants</b>				
Funding	Yes (premium)	9.16%	No	
Lending	No		No (rate buy-down discontinued)	
<b>Funding Rate/Term</b>	2%/short-term		4.2%/10yrs	
... after tax & grant	2 or 3%/5yrs		4.9%/10yrs	
<b>Lending Rate/Term</b>	4.8% or 5.5%/10-13 yrs		4.95-5.5%/5-10yrs	
... after tax & grant	4-5%/10-13 yrs		4-4.5%/5-10yrs	
<b>Spread</b>	2.5-2.7%		0.75%-1.3%	
<b>Fiscal Impact on Lending Rate***</b>		<0.5%		1.7%
<b>Fiscal Costs per \$ Financing Volume (single/couple)****</b>				
100,000 CZK		~5.5%/~5.5%		1.7%
300,000 CZK		~5.0%/~5.5%		1.7%
500,000 CZK		~3.0%/~5.5%		1.7%
1,000,000 CZK		~1.5%/3.1%		1.7%

Source: author's calculations. Notes: \*Mortgage loan preferences only apply to licensed mortgage bond issuers. \*\*\*Fiscal impact on CSH lending rates: i) stabilization of savings flow reducing liquidity premium, ii) interest-rate differential on undisbursed premiums that are booked as liabilities. \*\*\*\*Assuming individual loan-to-deposit ratio of 1, results reported for one/two CSH contracts per family. \*\*\*\*15% withholding tax on interest payments.

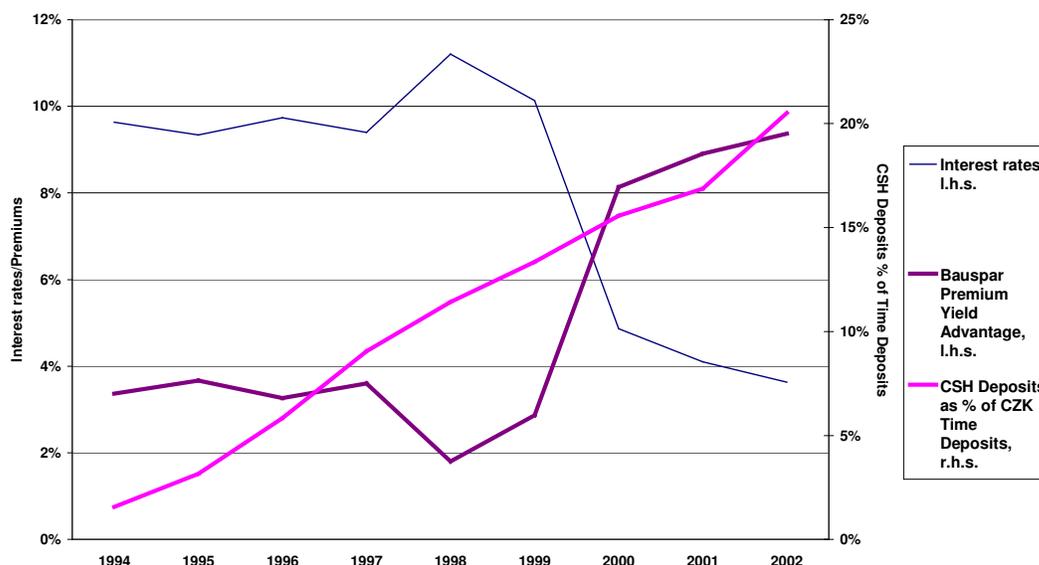
Currently, mortgage banks, assisted by low interest rates, exploit the tax exemption by issuing long-term bonds (10 years) on a large scale. Taking advantage of their low cost of funds, CSH institutions assist indirectly by buying mortgage bonds.

From the Czech government's perspective, the mortgage bond subsidies are a double-edged sword: on the one hand, increased bond issuance alleviates the mismatch problem for mortgage lenders that rating agencies were fearful of as a result of the strongly growing market. On the other hand – given the low spreads recorded in Table 19 - mortgage bonds are still not competitive with deposits as funding instruments for mortgage lending, and long-term subsidies might result in serious capital market distortions. Furthermore, tax subsidies annihilate any chance of attracting foreign buyers of mortgage bonds, and may result in conflict with the EU Commission as non-admissible state aid. As a result, a transition strategy for the mortgage bond market is called for - in parallel to reform considerations for the CSH market.

Considering their long-term character, which due to the protective function of the premium against deposit withdrawals is factual rather than legal, CSH deposits do not underly the 2% minimum reserve that banks need to hold for deposits with maturity under 2 years. Reserves are only applied to CSH deposits held over and above the minimum savings period, which are considered as short-term by the CNB. CSH deposits are preferentially treated by the national deposit insurance scheme – 0.05% versus 0.1% for general deposits. However, both rates are very low compared to the Slovak case, strengthening the impression of a less proactive policy in the Czech Republic towards matched funding of mortgages.

**44. CSHs Role in Substituting other Bank Deposits (Crowding Out).** The policy lag in aligning the CSH premium is clearly responsible for the partly dramatic substitution effects of bank deposits towards CSH deposits in the past 10 years. Figure 11 shows a record share of CSH deposits in the Czech time deposit market for 2002 – 20% compared to 11% in Slovakia – which is largely subsidy-induced. On the other hand, there was also non-subsidy induced substitution in the past as CSH played a credit quality anchor role during the banking crisis of 1997/8 - most CSH institutions are foreign-owned. At the moment, the entire Czech banking system is overliquid (see Table 17) so that substitution should not be expected to crowd out significant other lending activities. Rather, the danger is that soft funding conditions for CSHs that also feed into the mortgage bond market will induce an undershooting of interest rates in the mortgage market, resulting in a deterioration of credit quality due to excessive growth.

**Figure 11 CSH Deposits as a Percentage of Time Deposits and Determining Factors, Czech Republic**



Source: CNB, IMF, author's calculations.

## E. Fiscal Impact

45. **Premium and Tax Preferences.** CSH premiums in the Czech Republic represent a large and increasing share of both state budget and GDP. Premiums paid amounted in 2002 to 0.49% of GDP, compared to only 0.28% in Slovakia; in 2003, the figure is likely to increase to 0.55% (CZK 13 billion), and if no action on premium levels is taken will rise further. The Finance Ministry's intention behind the current proposal is to cut back the expenditures to half by 2004, i.e. returning to the level of 2000.

To the premium expenditures, the value of the generous tax preferences for CSH – in particular deductibility of savings yields and loan interest payments – should be added. Moreover it should be noted that CSH invest strongly in tax-exempt mortgage bonds, which limit their corporate income tax payments.

**Table 20 Fiscal Impact of CSH Subsidies in the Czech Republic, 1994 - 2003**

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002*	2003**
Premiums in million CZK	284	1,112	2,309	3,817	5,068	6,393	7,719	9,313	11,059	13,000
Premiums in % of State Budget	0.1%	0.3%	0.5%	0.8%	1.0%	1.2%	1.3%	1.5%	1.7%	1.9%
Premiums in % of GDP	0.02%	0.08%	0.15%	0.23%	0.28%	0.34%	0.39%	0.43%	0.49%	0.55%

Note: \*2002 GDP estimated by author. \*\*2003 premiums estimated by MoF and GDP estimated by author.

46. **Contingent Fiscal Liabilities.** The sensitivity analysis above would not suggest liquidity problems arising in the short-run; however, around the critical phase around 1007/8 would warrant anticipative and possibly corrective action. Given the popularity of the product, a re-adjustment of the premium level at that point in time could be sufficient to stimulate sufficient demand; however, there is a downside risk related to a scenario of a strong loan demand that should be explicitly calibrated by the regulator and for which CSH institutions should be required to hold actuarially determined reserves. It should also be considered that waiting periods, which are legally possible but currently not imposed, would possibly not be accepted by the borrowers. Institutions do currently not hold systematic technical reserves for demand shortfalls (one institution, CMHB, started but was ‘advised by auditor’ to dissolve position). In the short-term, losses could arise from negative spreads. These should be sufficiently covered by current voluntary reserve levels.

47. **Premium and Tax Incidence.** In 2002, the average CSH premium paid was 2,635 CZK per contract, implying an average monthly deposit of just CZK 880 (US\$28). Usually, in savings or income distributions the saving level of the median household is likely to be far less, implying median premiums perhaps as low as CZK 2,000. Since the current CSH premium limit is CZK 4,500, it is likely that the largest absolute premiums accrue to households well into the seventh or eighth decile of the income distribution. The system of tax exemptions creates further bias towards high-income households, as do the possibilities of double-dipping into CSH premiums by adding as many contracts as there are family members. The proposed measures, including the limitation of the premium payment to CZK 3,000 and action against double-dipping would correct this imbalance somewhat, but not altogether.

## F. Housing Sector Impact

48. **CSH and Access to Housing Finance.** CSH is widely held to have been an important source of formal housing finance for moderate-income borrowers throughout the 1990s. This has changed, as the mortgage market became more widely accessible after 2001. However, due to supply side constraints, house price to income ratios in the main urban centers continue to be very high, in the range of 8 to 10 annual incomes, and access is still an issue.

According to the CSH trade association, currently 80% of outstanding loans are under CZK 300,000 and the average interim loan amount is CZK 200,000, i.e. roughly US\$ 6,400. These figures are in line of with the data for Slovakia, considering the income level differences.

There are contradicting reports about the numbers of loans that have been extended. In the light of the Slovak figures, the author doubts claims of over 600,000 financings that might cumulate interim and CSH loans without giving consideration to prepayments. According to the association, CSH institutions have lent six times as often as mortgage lenders, which would yield the more realistic figure of approx. 350,000 to 400,000 financings.

The amount of projects financed with these loans will be again considerably lower, as households willing to invest must be considered to hold several CSH contracts. This will also increase the amount of financing provided per project, which should be rather in the range of CZK 400 – 500,000.

49. **Portfolio Structure and Growth.** Table 21 reveals that CSH loans in the Czech Republic are so far primarily used for reconstruction and modernization as well as transactions. The

distribution is roughly similar to Slovakia, with a slightly smaller share of new construction, possibly due to the higher Czech cost level.

**Table 21 CSH Loan Portfolio Composition, Czech Republic**

<u>June 30, 2002</u>	<u>Entire industry</u>
Modernization	39
Transaction (housing and land)	39
New construction	17
Other	10

Source: Roy (2003).

There is no market analysis available from any of the CSH institutions that could give insight about their growth and market share projections for the different market segments. Given the currently rising credit risk levels, anecdotal comments about expected growth rates in the next years (30%, Wuestenrot) appear optimistic.

**50. Housing Stock Modernization.** In 2000, there were 11,000 officially registered modernizations of housing units, which would be about half of the figure for new constructions. These largely reflect public and co-operative multi-family stock modernizations undertaken by legal persons, and leave out the sizeable private market.

CSH institutions in the Czech Republic focus on private sector clients and have so far not lent to legal persons. No market share figure is available, but given their overall share of 40% it is likely that the share in the modernization market exceeds 50-60%.

**51. Housing Stock Transactions and New Construction.** Secondary market prices are in the range of 750-1,000,000 CZK for apartments in Prague, and reach half the figure in smaller cities except Brno. Combining 2 or 3 CSH loans per family therefore generates a significant funding volume, especially in the regional markets. The relatively large share of transactions in CSH portfolio also reflects progressive housing construction techniques, with CSH loans funding land or raw construction acquisitions.

Between 1997 and 2001, average annual new construction was 24,000 units. Assuming an average price of CZK 1.25 million this would yield a funding volume of CZK 30 billion, of which 90% can be considered to be private, i.e. CZK 27 billion. The CSH funding volume for new construction in 2002 is just under CZK 3 billion, i.e. some 10%-15% of the new construction volume. As of 2001/2 at the latest, mortgage lending has replaced CSH as the main formal funding source for new construction. There have been suggestions of increasing co-financing levels of CSH and mortgage loans<sup>21</sup>; however, due to the unsolved legal problems, the author doubts that this practice is widespread.

**52. CSH and Housing Policy Budget.** As in Slovakia, the design of the CSH program, as well as the control of the housing use of the loans, are under the responsibility of the Ministry of Finance, and not of the Ministry of Regional Development responsible for housing policy. The latter has understandably lobbied since long to gain control over the program, and also for reducing the premium levels for the benefit of other housing programs.

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<sup>21</sup> Association for Real Estate Market Development (2002).

Considering the strong CSH and mortgage market growth and the entitlement nature of the subsidies, total expenditures for housing finance in the Czech Republic are currently ballooning. According to an earlier analysis of the author, CSH premium expenditures in 2001 captured roughly 40% of housing policy budget.<sup>22</sup> That figure is likely to have increased in 2002 and 2003 and should be now close to or over 50%.

Non-budgeted subsidies – public soft loans, tax exemptions and guarantees – were already sizeable in the 1990s, a fact that contributed to calls for the closure of the State Housing Development Fund. A review by the author under the 2000 World Bank Fiscal Expenditure Review yielded non-budgeted housing subsidies of roughly similar size to the budgeted positions. As predicted in the Review, due to the double-digit growth of the mortgage market the impact of full income tax deductibility of mortgage loan and mortgage bond interest income may create a new quality of fiscal costs in the years to come, unless subsidies are significantly cut back.

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<sup>22</sup> See Duebel (2002)

#### IV. LESSONS LEARNED FROM THE CASE STUDIES

53. **Financial Sector Policy Issues.** In both countries, the CSH systems has developed a segment of housing finance demand that other financial institutions either neglected – as a result of their corporate finance focus – or were inefficient providers of - due to their cost structures. The fragmentation problem has therefore been so far limited. On the other hand, considering differences in lending activity levels, only the Slovak case can be called a success, resulting from a combination of political pressure and more flexible business models. While in both systems, CSH institutions are established players in the reconstruction and modernization loan market segments, their future in the markets for secondary housing transactions and new construction is not yet clearly established.

The implementation of the CSH product in both systems brought about a strong and early growth in time deposits, at the expense of high fiscal expenditures. Clearly, CSH institutions have crowded out other financial institutions from deposit collection and bond issuance – in the Czech Republic considerably more so than in Slovakia; on the other hand, in both countries corporate loan book related banking crisis occurred during which CSH institutions proved as a stability anchor in the deposit market.

The experiences in both countries raise a number of financial sector policy issues:

- A first issue is that while the system is in principle viable in an *inflationary context*, if high savings premium levels are chosen to match market savings rates and avoid erosion of savings deposits, these will result in high initial profits of the CSH institutions, who will invest their excess liquidity at market rates in the securities market. In the more competitive Czech system profits so obtained were smaller than in Slovakia, despite the higher subsidy levels that accrue to clients mostly; but in both countries the ratio of market rate assets to total assets continued to be high throughout the first decade.

The resulting excess profits of the CSH institutions could be skimmed through various measures, for example i) asking the institutions to create a special reserve fund providing additional liquidity to future savers or borrowers, and not to owners, ii) operating with a profit re-allocation mechanism benefiting current savers, along the lines of life or unit trust insurance schemes, or iii) tapping excess profits through reserve requirements or mandatory investments in government bonds.

To limit fiscal costs at elevated levels of inflation from the outset, the product could be indexed on both savings and loan side. This option was considered for Slovakia and the Czech Republic before inception, but not realized due to the expectation of rapid stabilization and lack of political will to accept indexation of financial contracts.<sup>23</sup> It was consequently also not realized in the mortgage market, where rate buy-down subsidies were applied to reduce nominal rates. Indexation would have been appropriate; while it would have reduced the interest-rate risk protection value of the system and thus have slowed down savings, it would have contained fiscal costs. Indexation could have created distortions, if only CSH contracts would have been indexed, or have triggered demand imbalances during the eventual transition to fixed contract conditions.

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<sup>23</sup> Indexation was implemented in the Slovenian scheme. After the hyperinflation of the 1980s, most financial contracts in Yugoslavia contained indexation clauses, lowering the political threshold for its introduction.

- Secondly, for any inflation scenario there is danger of creation of demand volatility as well as high fiscal expenditures through *premium misalignment* with capital market conditions. This concern can be met by introducing a premium formula that contains an explicit link to inflation, nominal or real capital market rate levels.<sup>24</sup>

An annual or semiannual premium level adjustment would also strengthen the entitlement character of the premium program, since it would automatically stabilize demand and contain fiscal costs.

- The policy goal, however, should be to use the banking infrastructure built up in order to deepen intermediation with middle- and low-income consumers, which may require a temporary relaxation of purpose definitions. In the Czech Republic, CSH institutions are de facto capital market institutions rather than banking institutions. For example, there is *need for flexible loan purpose rules*, including a broadening of allowable housing-related purposes. For the sake of developing the consumer finance market, limitations to the double-dipping of subsidies through multiple CSH contracts could be taken at a later stage.
- Alternatively, subsidies could be focussed from the start on the lending rather than the savings side.

**54. Fiscal Policy Issues.** As the cases vividly demonstrate, the fiscal costs of introducing CSH can be quite large, and failure to align the premium level with capital market conditions can produce an explosion in costs. There are lessons to learn from both cases: in Slovakia, the Ministry of Finance's power to change premium conditions, while conducive to minimize misalignment, created stop-and-go when premium condition changes affected not only new but also existing contracts. In the Czech Republic, government's inability to change conditions enshrined in the enabling law rather than the annual budget law created the – worse – scenario of excessive and distortive subsidy levels.

CSH premiums should also be seen in context with overall mortgage subsidies: in Slovakia CSH is generally less subsidized than mortgage lending, even if several household members close contracts. In the Czech Republic, the reverse is true. Mortgage market subsidies should be generally reduced and means-tested or eliminated as capital market rates further decline. Finally, closely related to the premium policies pursued, both countries face demand stability issues that should be met with stricter regulatory requirements, for example actuarially determined technical reserves for smoothing demand as they are practiced in Germany.

**55. Housing Sector Policy Issues.** From a housing policy perspective, CSH has in both countries induced the development of a small loan market for housing. CSH is largely self-targeting through its small loan amounts and the limits on savings support and thus potentially a reasonable approach to target modernization needs and stock transactions in the short run, in particular if the number of loans per family is limited. The introduction of CSH also seems to exercise a behavioural impact in the housing sector by raising the willingness to pay for housing.

However, CSH is less straightforward to address many virulent problems of the housing stock; for example neither in Slovakia nor the Czech Republic CSH is used so far systematically to

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<sup>24</sup> See the annex for a discussion of the CSH premium formula practiced in Austria, as an example.

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provide finance for common areas (roof, elevator, structural repairs). The price and institutional reforms necessary to stimulate modernization in the multi-family stock have been slow in both countries. An example is the continuation of rent control with hard rent limits.

Finally, while in both countries CSH subsidies are booked under a budget position of the Ministry of Finance, and not of Ministries responsible for the housing sector, the large expenditures can be seen to have considerably reduced the room for manoeuvre of housing policy.

## V. CONCLUSIONS FOR TRANSITION COUNTRIES

The focus of the discussion is on countries experiencing macroeconomic fragility and underdeveloped banking and bond markets. This continues to be a realistic description for transition countries outside the current core candidate range for EU accession (Visegrad, Slovenia/Croatia and Baltics).

### A. Financial Sector Development

56. **Product Choice.** Two empirical observations lead into the guiding principles.

First, the consumer finance markets are segmented productwise, not just in transition countries. Those markets in transition countries with high latent demand and low credit risk should be served with tailored financial products. Housing modernizations and stock transactions are the segments with the highest latent demand in most transition countries that should be developed with priority.

Secondly, housing finance assets should be funded with domestic funding instruments, if possible distributed to a broad investor base. Corporate bond markets, while desirable in the long run, are costly to develop at an early stage of development, unless a strong role of government in guaranteeing the instruments is accepted. Long-term deposits use infrastructure that is built with priority, and can be seen as a reasonable temporary funding approach.

The advantages of CSH in that context include:

- CSH addresses directly the need to build equity prior to housing investment. Especially in markets characterized by high credit risk, LTV constraints for mortgages should remain in place, requiring a certain level of pre-savings. Such a risk mitigation approach is superior to a risk management approach, for example through mortgage insurance.
- CSH creates access to finance for broad borrower classes through the use of the screening instrument pre-savings.
- CSH generally produces short-term, small volume, non-collateralized assets. Mortgages, in turn, are generally long-term, large volume, and collateralized and/or insured. CSH loans do also not generally require mortgage lien registration and enforcement.
- In the home modernization loan market, alternatives take time to develop. Home equity loans, which are main instrument now for modernizations in developed markets, need flexible funding conditions. Consumer loans are initially tied to specific collateral (e.g., cars); penetration is slow and due to higher credit risk, rates charged are generally very high.
- Time deposits are easy to distribute and relatively easy to protect through bank networks, and thus are relatively liquid. Additional liquidity, especially for larger projects (new construction) that need longer amortization periods, can be provided through simple bank bonds (individually or mutually issued).

Disadvantages of CSH are:

- CSH is a composite product that is relatively difficult to price for the consumer. The consumer needs to analyze interest rates and fees incurred during savings phase, waiting period and lending phase to arrive at the total cost of credit.
- CSH is in the closed funding construction subject to contract demand fluctuations that depend on the interest rate volatility environment.
- Because of the former two restrictions, developing CSH without subsidies is difficult to achieve, although not impossible<sup>25</sup>.
- In the long-term, inroads into the CSH product must be expected by the developing consumer finance, home equity loan and mortgage insurance markets. Vice versa, there are legal and operational difficulties for CSH to integrate with the mortgage product in a first/second mortgage finance structure.
- Also, in the long-term well organized bond markets can reach similar liquidity levels as time deposits and offer greater risk management options to lenders.

The CSH *product* conceptually fits well into an *early transition context*, primarily due to its potential to provide access to credit for a broad class of low- and middle-income investors. CSH therefore present a chance for an early deepening of consumer finance with relatively safe assets. The likelihood of CSH to significantly crowd out the parallel development of mortgages, which will cater the secondary and new construction market for housing requiring large loan volumes, is initially low and will stay so for the first 10-20 years of transition. If sufficient additional legal and institutional conditions are put in place, CSH loans can also serve as a protective second mortgage layer for mortgage finance.

In order to realize those product benefits, however, their fiscal costs need to be contained and tightly monitored (see below).

### 57. Institutional Choice

The greatest obstacle to implementing CSH as it is practiced in Western Europe is the special bank principle, which gives rise to regulation and supervision costs for government as well as setup costs for investors. Clearly, this is a problem for small and mid-sized financial systems in transition countries.

As a guiding principle, the institutional choice for CSH should balance financial system size, operational risks and regulatory costs and complexity. Small systems should limit both risk exposure and regulatory cost.

The two main decision parameters are institutional specialization and closed vs. open funding sytem.

- Institutional specialization should not be seen per as leading to undesirable fragmentation, especially in an emerging market context. Unless markets are very small, specialization carries the extra-benefit of strong product and client focus of management, which is conducive to develop tailored products and a sound origination and servicing infrastructure.
- The validity of using several funding options is primarily a function of the macroeconomic and issuer credit risk environment. Closed savings and loan models have

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<sup>25</sup> According to information given by the German Association of Private Bausparkassen, Birla Home Finance Ltd., an Indian CSH institution created in April 2003, operates without state premiums. The British and American S&Ls of the 1920s, which operated housing finance under a similar setup, received no such premiums either.

been developed as substitutes in high inflation environments, often over extended periods. The general assumption for transition countries, however, is that these spells are limited.

**Table 22 Advantages and Disadvantages of Institutional Options for CSH Product Distribution**

Option	Character	Advantage	Disadvantage	Applicable situation
Universal bank	Open funding  Universal bank license	All housing loan products Flexible funding options (subsidy independent) No minimum scale requirement No additional regulatory/supervisory costs Efficient originator	No special product focus No special target group focus Inefficient servicer	Small market  Low inflation
Building society	Open funding  Special bank license	All housing loan products Special product focus Special target group focus Flexible funding options (subsidy independent) Efficient servicer and originator	Speciality requires minimum scale Costs of special regulation and supervision (moderate)	Mid-sized market  Low inflation
Specialized CSH institution	Closed funding  Special bank license	Applicable in high inflation context Special savings mobilization focus Special housing lending focus	Small loan sizes only Inflexible funding (subsidy dependent) Speciality requires minimum scale Costs of special regulation and supervision (high) Inefficient originator and servicer	Large market  All inflation scenarios

Table 22 describes the advantages and disadvantages of three feasible institutional models: universal banks distributing CSH products, the traditional closed special CSH institution and a new type of open special bank (building societies) offering both mortgages and CSH.

- The *universal bank* is likely to be the only suitable option for smaller financial systems. CSH product variants could be offered as a product line under special regulation.

Slovenia introduced CSH in 1999 under a program regulated by the National Housing Fund that also disburses the state premiums.<sup>26</sup> The program limited spreads chargeable by the banks to very low levels (0.8%), required them to disburse loans immediately after maturity of the savings contract, and disregarded a number of other typical safeguards for CSH, such as investment constraints, technical reserve requirements and special supervision.

More important than program parameters, which can be adjusted, are product and target group focus of universal banks which tends to vary widely. The author's view is that it is likely that chances are greater with specialists than universal banks that program

<sup>26</sup> See Butler, Duebel, Merstallinger (2001) for a discussion.

incentives will suffice to induce the desired focus on small uncollateralized and second mortgage loan products for low- and middle-income borrowers.

- The *closed special bank* system stands at the other extreme. Funding options other than CSH deposit collection are minimal, CSH funding liquidity is dependent on subsidy conditions, the product range is restricted – limiting in particular efficient use of origination and servicing capacity - and the special regulation and supervision costs are high. The system has a single advantage over the other options, which is the ability to isolate itself from capital market fluctuations. In capital market circumstances characteristic for Western Europe institutions survive if they reach minimum scale, either through high market penetration in a small market (Austria) or by being positioned in a large market (Germany). Because of the scale issue, specialized institutions are reduced even in larger markets over time to subsidiaries operating under holding structures that offer a wide range of banking and/or contractual savings products<sup>27</sup>.
- An intermediate model could be an *open special bank* (“building society”) offering CSH as it’s core, but not exclusive, product. This essentially two-product institution (mortgages, CSH) could combine elements of the historical UK/US and German/Austrian mortgage specialist models. S-Bausparkasse in Austria appears to develop her business model currently into this direction. The advantages of a combination would be scale, except for very small markets forbidding institutional specialization altogether, flexibility on both product and funding side and a better use of the specialized regulatory and supervisory capacity. The approach would in some sense be a back to the roots of the original building society model; a long-term future could be secured by developing capital market funding – either externally through asset sales to or funding arrangements with a national bond conduit or mortgage banks, or internally by with bank bonds or MBS – that would generate assets for liquid universal banks and the contractual savings systems. The main drawbacks of the model would be higher potential mismatch than for the closed special bank (but less than in the universal bank model due to the greater maturity extension effect of CSH savings) and the corresponding need for closer supervision.

A similar intermediate institutional model that has not been tested so far, but is currently actively considered by P.S.S. in Slovakia, as a development perspective, would be a *specialized provider of contractual savings services*, with CSH as one business line next to life insurance and pension products.

## 58. Implementation Issues

Implementing the CSH product, whether under a special or universal bank structure, requires a specific set of *regulations* and corresponding supervision capacity with the Central Bank. To detail these regulations goes beyond the purpose of this paper; a number of issues are worth highlighting here.

The relevance of flexible funding policies in the presence of liquidity risk would suggest that CSH institutions should be able to issue bonds, provide guarantees for issued MBS and include hedges with sufficiently rated counterparties as funding instruments. This would help to reduce the contingent liability of government, provided that corporate governance is sufficiently

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<sup>27</sup> An example is the German Wuestenrot group which combines specialized insurers, a CSH institution, a mortgage bank and other specialized financial services providers.

monitored. Issuing capital market instruments as early as possible would also add an element of market control.

Technical reserves should be mandatory and defined according to actuarial rules modelling the liquidity risk of the institution (see below).

On the asset side, historical loan-to-value constraints should be replaced by a form of credit risk model that defines an eligible maximum based on empirical default data. Legal persons should have access to funds (condominium associations, etc.). Unless implemented under a building society model from the start, pre-savings requirements could be relaxed if borrowers reach sufficient score, enabling the CSH institutions to fund larger loan amounts within certain limits.

When designing the institutional structure, close attention should be paid to the potential consequences of the *conflict of interest* that necessarily arises if private corporations manage a local collective of savers. The problem is exacerbated if large initial profits arise due to the format of subsidies (see below). Insurance and mutual fund industries face similar problems that are regulated through investment and profit allocation mechanisms. A more radical option would be to set up specialized institutions as mutuals.

If implementing a closed system of specialized CSH institutions, having an *emergency or exit strategy* is as important as the entry strategy from the perspective of regulators. On the institutional level, takeover or asset transfer arrangements resulting from stress situations should be clear, as should be the rules of deposit insurance. On the system level, strong regulatory action in combination with state support could be needed to counter stress situations. Reasons for system stress could be a permanent loss of attractiveness to savers, or prolonged adverse interest rate shocks.

## **B. Fiscal Policy**

**59. System Choice.** All transition countries have a long history of subsidized housing, as the sector was central to the implementation of socialism. After 1989, public housing subsidies were cut back significantly almost everywhere, but have been revived in an increasing number of countries due to disappointment about private construction activity. Subsidies for private housing construction and the mortgage market in particular were introduced with greater variety; mortgage interest deductibility, interest rate buy-downs and public guarantees or lending are the most commonly used instruments

In implementing CSH support, a number of guiding principles should be observed:

- The housing sector in general and the subsector to benefit most from the subsidy should be a priority for public support, inter alia because of its multiplier effects for the economy and tax revenues.
- Second, general fiscal policy principles should be observed, in particular neutrality of after-tax-after-subsidy user costs between different funding vehicles.
- Third, fiscal sustainability is an issue. Can promised subsidies be funded under various budget scenarios?
- Fourth, subsidies should be transparent, targeted and equitable.
- Fifth, measures should not give rise to contingent liabilities that potentially threaten fiscal stability in the future.

Advantages of CSH in this context are:

- CSH premiums are generally budgeted and transparent. However, in practice CSH enjoys also less transparent tax and regulatory support.
- Simple caps on premium levels can create a self-tested instrument. Similarly, supporting relatively small loan volumes, the distributive incidence of CSH subsidies is favorable.

Disadvantages of CSH are:

- The transparency of CSH premiums tends to become a curse, because of its high political visibility. Strong lobbying activity must be expected by specialized institutions, whose funding stability relies on subsidies. Because of greater intransparency, mortgage market subsidies are politically easier to adjust in that regard.
- While in theory the CSH system can be *set up* without a state premium program, due to consumer's having difficulty to price the contract and realize a positive contract value, demand will remain low. Reducing CSH premiums eventually to zero in the *going concern* is an untested option so far.
- Because a CSH loan is long-term and low rate, and is funded by potentially daily callable savings deposits, CSH is exposed to maturity transformation risk. The mismatch problem is reduced in practice by the link of the premium to a minimum savings period.

The fiscal disadvantages put CSH into a less favorable position than other mortgage subsidies which can be dealt with with less political frictions. We argue that placing CSH under the housing policy jurisdiction and budget will correct some of the disadvantages, especially the danger of ballooning subsidies.<sup>28</sup> Nevertheless, strict fiscal control is needed.

**60. Implementation Issues.** Two main points are worth discussing: designing a sustainable premium program and minimizing the contingent liability arising from maturity transformation risk.

In designing the premium program, the following issues arise:

- Personal subsidies should be a *legal entitlement*, provided that eligibility criteria are met. This requires some fiscal flexibility, but supports demand stability. The principle does not imply that premium level or formula should not be changed, if needed. Premium conditions for contracts concluded prior to a premium change should be kept constant in order to avoid the change to be interpreted as political risk.
- Premium levels and adjustment mechanisms should be set such that *allocative distortions*, in particular vis-à-vis alternative funding instruments for mortgage finance, are minimized. This requires doing the type of calculations presented earlier in this study.
- The *leakage* through subsidies to good brothers should be minimized. Note that leakage benefits the CSH institution only, if deposits are not fully invested in loans. Otherwise it leads in particular to undesired income redistribution within the population. It needs to be considered in that regard that mortgage bond investors, who are in a comparable situation as they generally do not take out loans, are likely to have higher incomes, inducing possibly stronger distributive distortions. In order to minimize leakage, CSH institutions should be encouraged to quickly develop their loan portfolio (see below, an important

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<sup>28</sup> This has never been a serious problem in Germany, for example; rather the reverse problem of excessive restrictions placed on receiving a premium has been a constraint.

strategy element is to ensure that income from intermediation is not taxed higher than income from bond investment, a condition that is often violated in practice).

Most problems in sample countries have been raised by violations against these three principles.

- An approach observing the first two principles *simultaneously* is indexation of premium levels, relating them to other mortgage market or occupational or individual retirement account subsidies. The *endogenous premium formulation*, explained in the annex, links the premium level to a lagged capital market rate observation.

The formula could be further refined to capture interest rate expectations embedded in the implied forward rate.

Also, the premium could be applied to real rather than nominal capital market rates, if the CSH system is indexed on both sides of the balance sheet.

Finally, the adjustment factors in the formula do not necessarily have to be set such that an advantage over other deposits offered in the market is obtained. The reason is that the CSH contract provides both a credit and interest rate option that within limits should compensate for any shortfall in savings yield<sup>29</sup>.

The regulatory approach to the *contingent liability* problem should focus on securing sufficient legal and asset-liability management options for the institution to manage all relevant circumstances. Various regulatory and fiscal measures potentially mitigate the risk arising from a sudden rate increase and consequent liquidity shortfall:

- *Technical reserves* can provide support for asset-liability management along the lines of the Bausparteknischer Sicherungsfonds practiced in Germany. Their function is to accumulate liquidity in interest rate decelerations and reduce liquidity in interest rate acceleration periods. Sufficiently large reserves tend to be built up in the start-up phase of the system. They are property of the savers collective, rather than the private owner.
- The better developed the *funding and hedging options* of the institution are in general, the better is its protection against the impact of a rate increase. Situations of sudden rate increases that will trigger higher lending demand and lower savings, can be simulated and hedged against. Similarly, situations of low interest rates can be used to issue bonds or sell future receivables. This speaks for adopting an institutional model with sufficient funding options.
- Austrian CSH contracts contain provisions that enable them to *raise lending rates*, if circumstances that ‘do not lie within the responsibility of the CSH institution’ lead to an increase in refinancing rates. However, this carries the risk of reduced attractiveness for consumers.
- Shortfalls in demand could finally be encountered with *higher premium incentives*. While this measure would at first sight be tantamount to a realization of fiscal loss rather than its mitigation, it could pre-empt a confidence crisis in the system as a whole.

A second liquidity stress scenario could arise from the *demographic transition*, which could lead to lower numbers of new savers supporting strong borrower cohorts. Again, well-developed funding options are essential: in a demographic transition scenario, real interest rates are unlikely

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<sup>29</sup> Reflecting this logic, the CSH premium in Germany is adjusted such that after-tax-after-subsidy savings yields rarely reach market levels, except for situations of very low market rates.

to remain high, and subsequent shortfalls in CSH deposit demand could be substituted by bond issues.

### C. Housing Sector Development

61. **System Choice.** A few principles should be considered:

First, it is pivotal that housing policy rather than fiscal policy makers make the choice over which policy instrument should be adopted or not. This has not been the case in either case country, leading to a considerable level of distortion among housing policy instruments. The finance authorities should be able to veto or object housing programs for fiscal reasons, but should not design or implement them.

Secondly, developing the policy alternatives should be the subject of a thorough housing sector and fiscal analysis that also considers frequently non-budgeted costs such as tax exemptions and the contingent liabilities of public guarantees<sup>30</sup>. Such an analysis requires capacity building in independent sector analysis and program evaluation.

A third guiding principle concerns the general goal in a transition context that programs should be designed such that they mobilize willingness-to-pay for housing in order to minimize both the ratio of subsidy to investment and leakage to non-housing uses. This rationality is dictated by the multitude of competing public investment needs combined with severe budget constraints on the one hand, and the relatively high endowment with housing units as a heritage of socialism requiring lower overall public investment on the other hand. Often the sector context is strong rent regulation and subsidies for the multi-family stock that de-facto remains public despite owner privatization. In this case, loan programs are more suitable instruments to raise willingness-to-pay than grants. Also, subsectors with high potential willingness-to-pay, e.g. modernization, land development for single-family houses, etc. should be initially selected with priority to maximize multiplier effects. Since public loan programs are often confused with grants, the private sector should cofinance as a rule.

A fourth consideration requires that scarce housing policy budgets select programs that are targeted. The easiest targeting method in countries without a social welfare infrastructure that might serve for income verification is to restrict eligible investment and loan size per beneficiary. Clearly, targeting should come along with measures stimulating willingness to pay even of the poor, observing the aforementioned efficiency principle. A purely redistributive housing policy would in the transition context risk to create poverty trap situations.

Fifth, systematic distortions of user costs between different subsectors of the housing sector, rental, co-operative and ownership, should be avoided. Similarly, in an intertemporal perspective, housing subsidies should not crowd out other savings, especially those for retirement purposes other than housing.

The main advantage of the CSH product with regard to this list of principles is that it presents conceptually a reasonable approach to target the priority investment areas of modernization and transactions involving smaller financing sums, which are particularly relevant in the early phase of transition. CSH can also be self-targeting if the limits set on the maximum savings sum

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<sup>30</sup> See the IMF's Code of Good Practices on Fiscal Transparency of 2001 for guidelines. A manual is available for download from [www.imf.org](http://www.imf.org).

supported by premiums are set tightly enough. The issue of closing several contracts per household can be dealt with by tightening the eligibility criteria of the program. CSH has behavioral impact by raising willingness to pay for housing, if loan takeout is sufficiently stimulated.

The disadvantages of CSH are first and foremost of fiscal nature and have been dealt with in the previous section. In terms of the applicable investment range, CSH has limits in that its loan volumes are limited, making it less relevant to enable larger stock acquisitions and new construction. Also, an attack to the problem of structural modernizations of the multi-family housing stock - roof, elevator, heating/energy systems, structures - should have priority for housing policy in transition countries, given the amount of capital that is at stake through dilapidation. Since CSH programs in Western Europe have not been designed for this situation, tailored solutions of saving-borrowing of legal persons, e.g. condominium associations, would need to be developed.

What are the principal alternatives to CSH programs in the different submarkets of housing finance?

- In an early stage of transition without deep consumer finance or home equity loan markets, *modernization and renovation programs* can be set up by state agencies that use bank networks for distribution. The modernization of the East German housing stock was largely delivered through such a program. If small loan volumes are not profitably serviced by the existing banking infrastructure, which is likely, the agency will have to pay servicing subsidies. A second issue is the distribution of credit risk, which the agency will have to at least partly place with the originator to structure monitoring and screening incentives properly. Thirdly, banks are often reluctant to market the program for fear of cannibalizing own, more profitable loans to their main target group. CSH in this area keeps a certain advantage by providing a permanent origination and servicing infrastructure for small and moderate sized housing loans, which requires – at least conceptually - comparatively small public investment.
- Finance for *progressive housing* construction has been provided by microcredit institutions, which, being governed by a similar principle of collective savings and loans, can be traced to the same roots as CSH. In Latin America, microcredit institutions have been mostly active in a slum upgrading and urban modernization context. Loan amounts of microcredit institutions are generally smaller than what CSH institutions provide, which keeps credit risk lower but puts brakes on operational efficiency.
- *Stock transaction* loan programs exist in transition countries de facto in the form of installment sales, and public loans for privatizing tenant-owners. This is the first market segment to attract the interest of mortgage lenders, once a minimum legal and technical infrastructure is in place. CSH institutions retain a certain advantage in this market through the pre-screening of borrowers as long as consumer finance databases are under development.
- With respect to the financing of *new construction*, the screening function of CSH is in Western Europe about to be replaced through other forms of credit enhancements, for example mortgage insurers, who insure LTV portions above 60, 70 or 80% based on credit risk models, or by mortgage lenders ‘self-insuring’ higher LTVs of their customers. However, transition countries have a different context. Here both private rental and consumer credit markets that could build credit histories of consumers are in a nascent stage. Pre-savings, or simply downpayments, remain an important form of screening mechanism, which CSH can establish.

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In an initial transition context, the CSH product has the potential to be a reasonably efficient finance channel for housing sector development, since it primarily appeals to the many consumers that cannot afford to buy new finished housing and rather acquire and modernize the existing stock or buy land and build in self-help.

**62. Implementation Issues.** The priority implementation issue is that housing policy should gain effective control over design and implementation of all housing-related programs, including CSH. This implies a clear assignment of the political responsibility for the result, which is currently blurred.

Enabling housing policy makers to manage fiscal costs as a part of the housing policy budget will increase their direct cost responsibility and lead to the application cost-benefit approach at all stages of policy making: proposal, decision-making, implementation and evaluation. A CSH program that is selected and implemented in this way will be less susceptible to political risk in the going concern.

Benchmarking existing CSH programs directly to alternative housing policy instruments will also trigger measures that force CSH institutions to invest loanable funds into housing loans more rapidly. These could include inter alia:

- The formulation of performance targets for the implementing institutions.
- Regular published housing policy performance results.
- Tax and subsidy incentives for well performing institutions.

The natural counterpart to address issues of indexation and strategies to contain the risks arising from possibly too fast loan growth or liquidity volatility will be the central banks rather than the finance ministries.

## VI. ANNEX

### A. A Primer on Contractual Savings for Housing (Closed System)

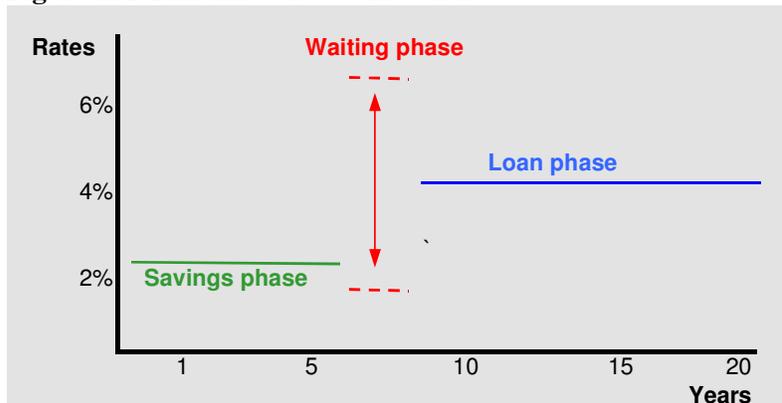
#### Description

CSH is a combined savings and loan product with a strong option-theoretic character.

The main timelines of a CSH contract are:

- Savings phase. Savings rates are usually fixed or variable with floor. Savers pay underwriting fees in relation to the contract sum (savings deposit plus loan). These usually get reimbursed in full or in part if the saver does not exercise the loan option.
- Waiting period: for liquidity management reasons (e.g., shortfall of new deposits), a loan allotment immediately after the completion of the minimum contractual requirements (certain % of total contract sum, minimum length) cannot be guaranteed. A waiting period of variable length is the result. Both the length of the waiting period and the rate for interim finance to be paid by a client willing to invest immediately are uncertain ex-ante. Interim finance usually is taken up over the entire contract sum, i.e. savings and loan.
- Loan phase: Loan rates are usually fixed or capped in advanced. Loans are serially amortized, typically over between 8 and 20 years. Borrowers pay a loan closing fee.

**Figure A 1 Timelines of a CSH Contract**



Source: author's representation.

Some general constraints of the closed system need to be observed:

- CSH can only provide limited financing relative to cost of a new dwelling or stock transaction. On aggregate, in the closed system savings equal lending,  $S=L$ . This constraint translates in the traditional CSH model into an individual  $S=L$  constraint, in practice  $L < S * 1.2$ , or  $S > 0.4 * (S+L)$ . In Germany and Austria, aggregate savings are diminished by a technical reserve funds to be held in order to stabilize impact of fluctuating demand on waiting period.

- Because of the limited funding amount, there are often additional co-ordination costs with mortgage lenders. In the German system, CSH loans are second mortgages, i.e. ‘piggy-back’ the first mortgage loan of a mortgage or savings bank.

### Valuing a CSH Contract

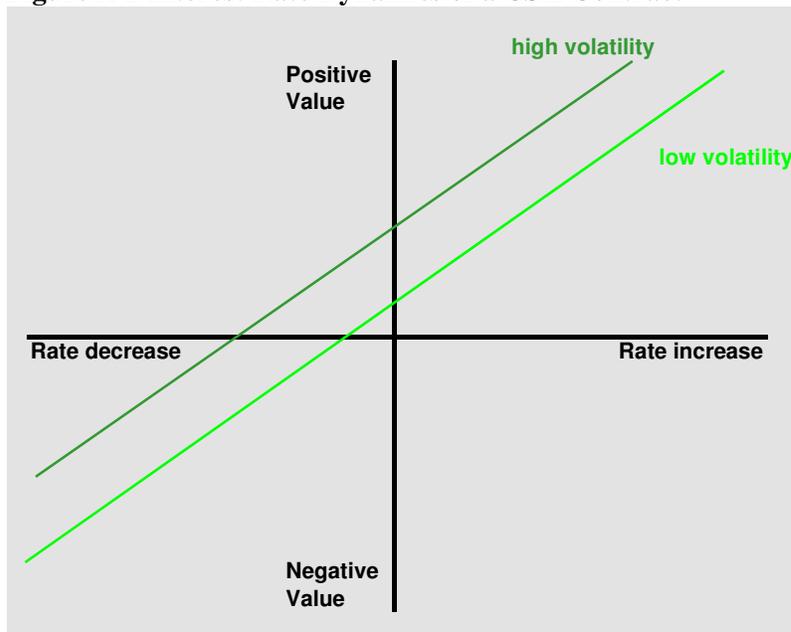
A CSH contract is compounded of at least three different products:

- *Savings product*: usually comes with a state premium paid proportionally to savings and the option to use premium and saved amounts for consumptive purposes after the minimum savings period (disposal option)
- *Access to credit (credit option) product*: (i.e. loan option, except for very remote possibility of denial). As CSH institutions do not differentiate between credit risks and rarely deny access, the saver implicitly acquires the option to lock in his credit risk premium for a fixed level at some point in the future.
- *Interest rate option product*: CSH offer a fixed-rate or capped loan product, which often do not exist or are expensive to obtain in the banking/capital market (Reason: inflation history, political risk).

Pricing a CSH contract is a complex undertaking and should be done product by product.

Figure A 2 gives an intuition of the determinants of the savings and interest rate option products embedded product while disregarding the credit risk option, the option of the institution to impose a waiting period between saving and borrowing, state premiums, fees and bank spreads.

**Figure A 2 Interest Rate Dynamics of a CSH Contract**



Source: Author’s representation.

Under these assumptions, the value of the CSH contract will depend on future interest expectations and interest rate volatility alone. Since the interest rate option always has a positive

value, even if rates are expected to remain constant, as long as volatility is not zero, the contract has a positive value.

The value rises with volatility, implying a higher interest rate option value. This is a typical situation in countries with macroeconomic instability – CSH systems were created in the 1920s which were characterized by high inflation - or banking sector fragility. Often, fixed rate products are not available at all.

The contract can easily become negative in value, however, if rates are expected to *systematically* drop, violating the typical option-theoretic scenario.

This will be typically the case in a disinflation process, which was characteristic for Western Europe and the U.S. in the 1980s and is now for transition countries. Figure A 2 demonstrates that the impact of a decrease in rates would only be softened if volatility would rise at the same time. Economically, this might happen, if the disinflation brings about a banking crisis, as was the case in many transition countries. However, in a disinflation scenario, volatility will not be expected to increase over longer time periods.

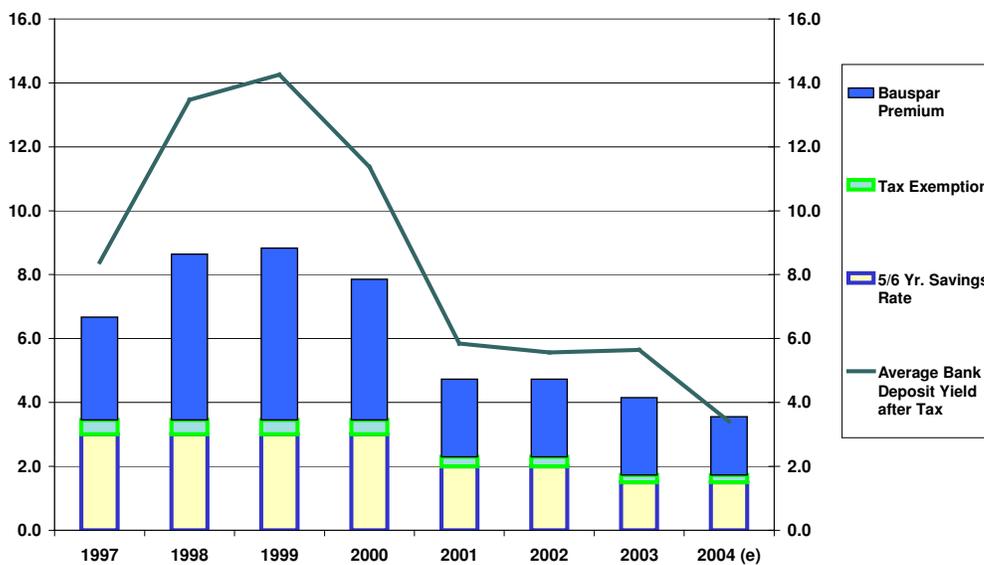
Clearly, the balance can also be easily tipped by the residual combination of option values on both sides, bank spreads, fees and savings premiums. In the graph, the net effect may shift the value curve upward (e.g., premium yield impact larger than fees+spreads) or downward.

In a steady state situation of the closed system where incoming savings are fully invested in loans, fees are becoming the crucial competitive parameter of the system. Fees may include i) closing fees, ii) account management fees, iii) loan exercise fees and iv) loan commitment fees. As spreads are usually fixed or capped by law, the political strategy of the CSH institution will be to seek for sufficient premium in order to allow for sufficient fee income.

## B. Simulation of Austrian CSH Premium Model for the Slovak and Czech CSH Systems

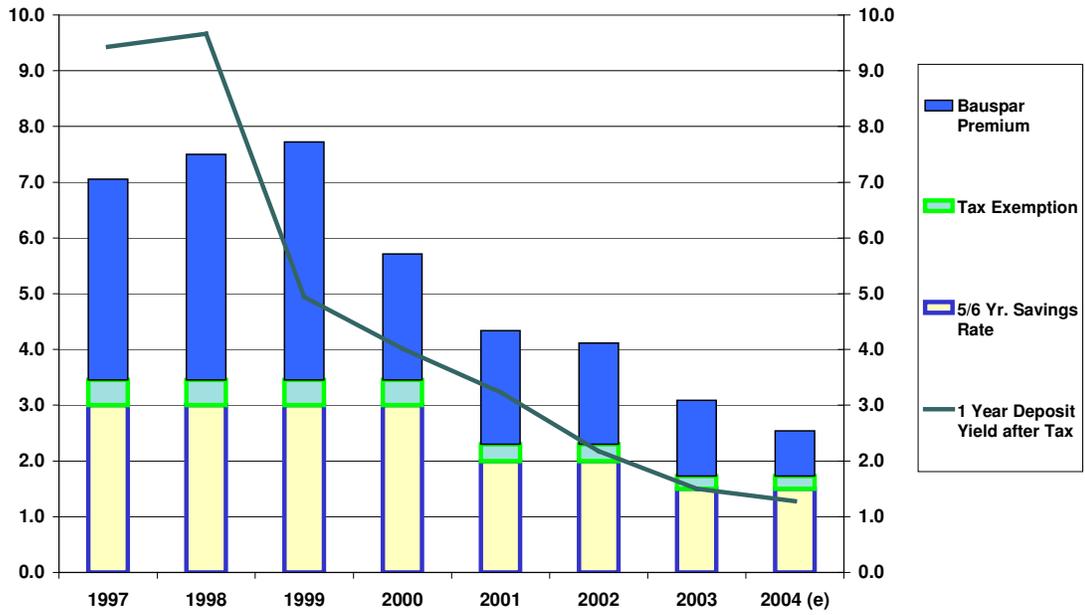
Austrian premium formula:  $P_t = 0.75 * r_{t-1} + 0.8$ , with  $r_{t-1}$ : secondary market yield for all Austrian domestic debt securities of November of preceding year.  $3\% < P_t < 8\%$ .

**Figure B 1 Slovak Republic: After-Tax Yield of CSH with Austrian Premium Model**



Sources: Author's calculations. Notes: Typical savings rate, actual rates may differ by institution. 25% withholding tax. CSH premium yield computed as average yield of six savings cohorts (years 1, 2, ..5) assuming identical savings and premium yield as in period 1, duration approx. 3 years.

**Figure B 2 Czech Republic: After-Tax Yield of CSH with Austrian Premium Model**



Sources: Author's calculations. Notes: as Slovak Republic. CSH yield computation with five cohorts, except for 2004.

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## **B. Data Sources & Links**

### **1. Czech Republic**

#### **Policy**

Czech National Bank

<http://www.cnb.cz/>

Ministry of Finance

<http://www.mfcr.cz/>

Ministry of Regional Development

<http://www.mmr.cz/>

#### **Contractual savings Industry**

Ceskomoravska Stavebni Sporitelna

<http://www.cmss.cz/>

Raiffeisen Stavebni Sporitelna

<http://www.rsts.cz/>

Ceske Sportelny Stavebni Sporitelna

<http://www.burinka.cz/main.php>

Wuestenrot Stavebni Sporitelna

<http://www.wuestenrot.cz/>

Complete list of Contractual savings Institutions

[http://www.finance.cz/english/banking/banks\\_directory/building\\_savings\\_and\\_loan\\_banks/](http://www.finance.cz/english/banking/banks_directory/building_savings_and_loan_banks/)

#### **Other useful links**

## 2. Slovak Republic

### Policy

Slovak National Bank

<http://www.nbs.sk/>

Ministry of Finance

<http://www.finance.gov.sk/>

Ministry of Construction & Regional Development

<http://www.build.gov.sk/>

### CSH Industry

VUB Wuestenrot Stavebne Sporenie

<http://www.vub-wuestenrot.sk>

Prva Stavebna Sporitelna

<http://www.pss.sk/>

CSOB Stavebna Sporitelna

<http://www.csobsp.sk>

### Other useful links

## 3. Comparators

### CSH Industry Germany

PrivateBausparkassenAssociation:

<http://www.bausparkassen.de/>

BHW

<http://www.bhw.de/>

Schwäbisch-Hall

<http://www.schwaebisch-hall.de/>

Wüstenrot

<http://www.wuestenrot.de/>

### Other useful links

### Austria

#### CSH Industry

Raiffeisenzentralbank

<http://www.rzb.at/>

Allgemeine Bausparkasse

S-Bausparkasse

<http://www.sparkasse.at/sBausparkasse/>

Wüstenrot

<http://www.wuestenrot-bausparkasse.at/>

### Other useful links

Comparison of bank conditions

<http://www.bankkonditionen.at/produkte.php>

Consumer protection in Bausparen

<http://www.wohnbausparen.at/>