# Financial indexation and fixed interest rates

*In April 2002 the Ministry of Commerce requested the Central Bank to investigate the benefits of fixing interest rates on inflation-indexed deposits and loans. A report was subsequently compiled on this issue and is published here in its entirety. The Central Bank's finding is that there are no grounds for applying the legal sanction to impose fixed interest rates on indexed loans. In part this finding is based on the general principle of the freedom of contract, but also acknowledges that a large proportion of inflation-indexed household borrowing is already at fixed rates of interest, that all banks advertise both fixed and variable rates, and that a ban on variable lending rates would make corresponding restrictions on supply of deposits unavoidable.*

The report was prompted by a public debate about the merits of fixed versus variable interest rates on indexed liabilities. It is divided into three sections. The first addresses the current policy on indexation of financial liabilities, i.e. the authorisations and restrictions that are in effect at present, with a summary of changes and policies in this field from 1995-98. Section II discusses the economic advantages and disadvantages of fixed interest rates on indexed liabilities. The final section presents the results of a survey on the current practice at credit institutions, i.e. the extent to which they offer fixed interest rates on their indexed lending.

*Main conclusions*

The main conclusion of Section I is that there are no grounds for changing the regulations on inflation indexation for the time being. Legal sanction to impose fixed interest rates on all indexed liabilities should therefore not be applied. This opinion is based, firstly, on the principle that this is best left negotiable between lenders and borrowers. Secondly, that a very large share of lending to households is already on fixed rates. Finally, this would contradict the policy adopted in 1998 when the idea of prohibiting inflation-indexation of deposits was rejected. Fixing rates on tied indexed deposits would be tantamount to replacing indexed deposits with indexed bonds or certificates of deposit.

Main findings of Section II:

- In a world of competitive markets and readily available information, official intervention in negotiated terms is both unnecessary and undesirable. Restricting a given loan form by law poses the risk of a lost opportunity of matching the wishes of borrowers and lenders.
- It is an advantage if the outcome of a financial contract is foreseeable, with little likelihood of deviations that could lead to insolvency. Indexed contracts generally have a more predictable outcome than non-indexed ones.
- Transmission of Central Bank policy interest rate changes is not a major determinant of whether to promote fixed indexed lending rates. However, international research suggests that variable rates enhance the transmission of interest rate changes.
- Since deposits are revocable commitments, from the viewpoint of risk management it is probably more suitable for credit institutions to have variable rates on indexed lending, especially on loans which are financed with indexed deposits. Nonetheless, credit institutions should quite easily be able to manage such risks by restricting the supply of indexed deposits and applying general rules about matching the asset and liability sides of the balance sheet.

- Real interest rates on non-indexed bonds have been somewhat higher and considerably more volatile in recent years than on indexed loans. Restrictions on loan indexation are therefore unlikely to improve the finances of borrowers. It is worth underlining, however, that the spread and relative weight between the two forms are not great enough to be able to cause substantial damage to borrowers if indexed variable-rate loans were restricted.

The main findings of a survey conducted early in 2002 and presented in Section III were as follows:

- Total indexed lending by credit institutions to households and businesses amounts to roughly 750 b.kr. Households account for 79% of this lending and businesses 21%.
- Just under three-quarters of indexed lending to households is on fixed interest terms, largely explained by the fact that housing bonds issued by the Housing Financing Fund, which are in fixed-rate format, account for 60% of indexed lending to households. Indexed lending to businesses, on the other hand, is divided more or less equally between fixed- and variable-interest loans.
- As a rule, customers cannot choose between fixed and variable interest rates. In most cases the credit institution lends only at fixed or only at variable rates, with special rules applying in other cases. However, there are some instances where the customer has a choice.
- Most credit institutions make their own decisions regarding any changes in the interest terms of variable-rate loans, although some pension funds take their cue from housing bond yields, interest rates announced by the Central Bank or other interest rates.
- Fixed-interest loan agreements rarely contain review clauses and almost without exception the borrower is allowed to prepay them, in most cases at no extra cost.

## I Current policy and situation

### *Prevailing policy*

Indexation of financial obligations is covered by Chapter VI of Act no. 38/2001 on Interest and Price Indexation. With reference to this act, the Central Bank has issued Rules no. 492 from 21 June 2001. These include a clause stating that indexation may only apply to loans with a minimum original maturity of 5 years and to deposits which are tied for a minimum of three years. The requirement on tying deposits may be waived in certain cases, including regular savings schemes. No stipulation is made regarding fixed or variable interest rates, since the Central Bank has not exercised its legal sanction under paragraph 1 of Act 15 to decide, upon receiving the approval of the Minister of Commerce, that the interest rates for indexed deposits and loans shall be fixed during the period of the loan.

In the Central Bank's view, there are no grounds for changing these rules at the moment, neither by introducing new restrictions nor lifting existing ones. This is a different standpoint from that previously taken by the Bank, for example when the rules were reviewed in 1995. One reason is that fixed interest rates already cover a large proportion of all indexed lending, without being mandatory. Furthermore, it should be borne in mind that there was a policy rethink following a report by a Ministry of Commerce committee in 1998. This needs to be explained by recalling several aspects of price indexation policy over the period 1995-98 and the subsequent experience.

### *Review of the Government's price indexation policy*

In connection with the national wage settlements in February 1995 the Government announced plans to reduce the extent of price indexation in stages.[1] In a letter to the Central Bank on March 1 1995 the Minister of Commerce asked for proposals regarding this policy. The Bank's reply, dated May 3 1995, outlines a plan for helping to achieve this with phased extensions of the minimum term for price indexation of loans and the tied period of indexed deposits. These proposals were in line with the find-

1. See *Morgunblaðið* newspaper, 21 February 1995.

ings of a Ministry of Commerce committee in 1993.[2] This plan was followed up with amendments to Central Bank rules on price indexation until the new levels of five years for lending and three years for deposits were reached on January 1 1998. One further phase was proposed in the plan, scheduled to enter into force in the beginning of 2000. This was abandoned, at least temporarily, following the opinion of a committee which discussed the Government's price indexation policy.[3] A few words need to be devoted to the policy outlined in the Central Bank's letter of May 3 1995, including the final phase.

*Arguments in favour of a longer indexation reference*

It can be argued that price indexation of financial obligations is suitable in the case of long-term contracts but unsuitable for short-term ones. Indexation of short-term obligations of the banking sector has an undesirable effect on interest rate formation and can threaten financial stability. Thus in the Central Bank's view it was prudent to reduce the use of indexation in short-term contracts.

The final phase, which was never implemented, would have prohibited commercial banks and savings banks from accepting price-indexed deposits. This would have completely eliminated the risk posed to deposit money banks (DMBs) by indexed deposits, whereby a sudden surge in inflation or fears about it could prompt a mass transfer of savings to price-indexed accounts. DMBs would shoulder the liability for indexation without any new capital inflow, making it difficult for them to hedge by buying indexed bonds.

Had the "final phase" been reached, the use of variable interest rates for indexed agreements would very probably have plummeted. Banks would have been able to offer small-time investors an indexed savings option by selling bank bonds. These are a convenient product for the markets if they are at fixed interest rates, which is the general rule for listed bonds in Iceland. In its letter to the Minister dated May 3 1995 the Central Bank letter considers the implications of the planned ban on indexation of deposit accounts for fixed and variable interest formats: "If indexation covers only long loans and listed securities, as is aimed, but not deposits, it is likely that variable interest rates in this area will soon become a thing of the past."

*Committee report, 1998*

As pointed out above, nothing came of the "final phase". In its report to the Minister of Commerce in October 1998, the committee considered that "further restrictions should not be imposed on the use of price indexation". The majority recommended that current "restrictions will be maintained for the time being." It added that "the Government must remain alert to dismantling the restrictions that have already been set, when this is warranted by market conditions". A minority on the committee considered that "current rules that limit price indexation of financial obligations need to be abolished more swiftly than the majority recommends". Thus the majority and minority were unanimous on the need to abolish limitations on indexation, but differed as to how quickly to do so.

A new law would have been needed to prohibit indexation of deposits. The Minister decided to follow the committee's recommendations and did not sponsor a parliamentary bill for the ban. Since the committee's report no further restrictions have been introduced, e.g. neither extending the minimum term of indexed obligations nor prohibiting the use of variable interest rates.

In advocating unrestricted price indexation, the committee totally reversed the policy of scaling down indexation. Its main argument was that restrictions on indexation should not be imposed in terms of rules on financial obligations, since none apply to other types of contract (rent, contractor services, etc.). In fact this argument is disputable, as shown by the various restrictions and duties that are imposed by law on financial companies but not on other businesses. The reason, of course, is that security is considered crucial in view of to the importance of financial companies for the well-being of households, legal entities and the economy as a whole.

2. Ministry of Commerce, October 1993: Interest rate formation in the credit market.

3. Ministry of Commerce, October 1998: Review of the Government's price indexation policy.

*Experience in recent years*

Questionable as this argument may be, the broad outcome could be acceptable, namely to pause and neither increase nor ease restrictions on price indexation. An acceptable compromise may have been achieved with the limits that had been established, i.e. 5 years for lending and 3 years for deposits. At least, typical problems created by indexation at the short end do not seem to be prominent under the present circumstances. The surge in inflation in 2001, for example, indicates that the risk considered to accompany indexed deposit accounts is no longer present. In that year inflation soared to more than 9% on an annualised basis, without provoking a large-scale switchover of savings to indexed accounts. The three-year minimum tied period for indexed deposits may suffice to dissuade small-time investors from speculation. This experience probably shows that there is no reason to ban indexation of deposits for fear of financial instability.

Prohibition of variable interest rates with indexation would probably discourage the use of deposits. In many ways an indexed fixed-rate deposit account has the same properties as a bond. After a change in interest rates, for example, an account bearing the "old interest rate" would be closed for further deposits. A regular depositor in an indexed savings account, e.g. under a pension savings scheme, would need to open a new one every time interest rates changed. This invites the conclusion that if there are no grounds for prohibiting indexation of deposits, there is no reason to ban variable rates on indexed contracts either.

It could be asked whether the provider of a variable-rate loan could abuse his dominant position in order to change interest rates to his own advantage. Obviously this risk is at hand, but there is no evidence that the commercial banks and savings banks have done so. Such an argument does not seem to justify mandatory fixing of interest rates.

It would be preferable to achieve advances in the inflation indexation framework without having to impose them by law. Such developments are certainly taking place, as shown by options for borrowers to choose between fixed and variable interest rates. All banks announce fixed as well as variable rates for bonds when they announce interest rate changes. Previously, indexed bank loan rates were almost exclusively variable.

*The extent of price indexation*

Has the extent of indexation actually been reduced, as the Government announced it would aim for in its declaration of February 1995? Table 1 shows that the indexed component has not decreased relative to total deposits. The proportion of indexed loans to total lending by DMBs and credit institutions has dropped somewhat. Largely this is the result of a period of heavy foreign borrowing and on-lending by domestic credit institutions. Relative to GDP, indexed lending has not gone down – on the contrary. Robust credit supply from the Housing Financing Fund is probably a strong factor at work.

Table 1 Price indexation at year-end 1994 and 2001/2002

| *From DMB accounts* | *End 1994* | *Most recent*[1] |
|---|---|---|
| Indexed deposits as % of total deposits | 26.2 | 27.4 |
| Indexed deposits and securities issues as % of total indexed deposits and sec. issues | 33.9 | 27.4 |
| Indexed loans as % of total loans | 44.3 | 28.2 |
| Indexed loans and securities portfolios as % of total indexed loans and sec. portfolios | 48.6 | 28.0 |
| *From credit system accounts* | | |
| Indexed loans as % of total loans and securities portfolios in credit system | 35.8 | 22.1 |
| *As proportion of GDP* | | |
| *From DMB accounts* | | |
| Indexed deposits as % of GDP | 9.7 | 13.6 |
| Indexed deposits and securities issues as % of GDP for the year | 14.3 | 20.8 |
| Indexed loans as % of GDP | 29.1 | 26.8 |
| *From credit system accounts* | | |
| Indexed loans as % of GDP for the year | 88.5 | 95.4 |

1. End-2002 for DMBs and end-2001 for credit system.

It is clear, however, that indexation of short-term obligations has diminished over this period. Initially the minimum maturity for indexed loans was 2 years and deposits could be offered with indexation if tied for a minimum of 6 months. Minimum limits are now 5 years and 3 years respectively. Furthermore, the Treasury has recently been offering non-indexed bonds with a much longer maturity than was customary. Indeed, the 1993 committee report pointed out

the desirability of the Treasury pioneering a wider non-indexed portfolio in this way.

A breakdown of lending by fixed and variable rates is given in tables at the end of Section III.

## II Advantages and disadvantages of fixed and variable rates on indexed obligations

This part of the report discusses the advantages and disadvantages of fixed and variable rates on indexed obligations from the perspective of macroeconomic impact, monetary policy transmission and financial stability. It begins with a general discussion of the nature of financial contracts.

### *Financial agreements and risk profile*

There is broad consensus among economists that in a world of perfect competition and perfect information to which all market participants have equal access, financial contracts will represent the best result and there is no need for official intervention to change it. In such a scenario, freedom of contract will always prove most effective. In the real world, however, information about the future is always imperfect and in some cases markets for hedging against conceivable contingencies may not exist. Information is also spread unevenly among market agents. This creates conditions for market domination and imperfect competition.

Information is inherently imperfect and asymmetrical in financial markets where trading essentially involves the delivery of money today against a promise of future repayment. Both the lender's and the borrower's assessment of the future is therefore crucial for the pricing of such contracts and also for the distribution of the risk involved between the contracting parties. Thus the provider of a non-indexed fixed-rate loan lender, for example, bears the entire risk connected with inflation volatility, but this is eliminated in indexed fixed-interest lending. The risk posed by changes in market interest rates or the economic cycle and bankruptcy is also spread in different ways depending on the individual features of each contract, as discussed below.

When all is said and done, loan contracts are favourable for borrowers if their real disposable income after debt service is strong and they face little uncertainty about that purchasing power. From the borrowers' point of view, it is beneficial to have the lowest possible debt service burden, which changes in pace with real income. Borrowers clearly face less risk of insolvency if the level of debt service fluctuates in pace with income rather than independent of it. A further advantage is if fluctuations in real disposable income after debt service are broadly the same for all borrowers instead of temporary prosperity being shared out unevenly, which could create tension and unease.

Indexed contracts have the advantage that there is less uncertainty about their outcome compared with non-indexed agreements. Governments have less opportunity to affect their real outcome than when non-indexed agreements are involved. Most indications are that owners of capital appreciate this predictability, which as a rule results in lower real interest rates on indexed obligations than on non-indexed ones.

Against this background, how does the effect of whether interest rates are fixed or variable alter over the term of an indexed loan? With fixed real rates, an informed borrower is fully aware of the real debt service burden. If he finds the loan expensive, he has the chance, at least notionally, of deferring it. If he nonetheless takes the loan, he is left with high debt service, as are borrowers who imprudently fall into a high-interest trap. Borrowers at relatively low fixed rates, on the other hand, reap corresponding benefits. Thus the cost of natural or manmade fluctuations in real interest rates is unevenly distributed if they are fixed, and increasingly so the longer the loan. Variable rates make the debt service burden more uncertain beforehand, but all borrowers absorb fluctuations in the same way, and there is more likelihood that the burden will be relatively lighter when the economic climate is poorer. Hence it cannot be taken for granted that borrowers' ability to fulfil their obligations is any more uncertain under variable rather than fixed rates of interest. That depends on the interaction of debt service and income.

However, borrowers are not always informed and expectations can prove wrong. Asset price bubbles and subsequent financial instability may partly originate in such factors. What are the advantages and disadvantages of fixed or variable interest rates when seen in this light? It can be argued that fixed-rate loans are potentially riskier if excessive expectations

are made about future liquidity, insofar as they increase the likelihood of insolvency in the future. For variable-rate loans, lower future interest rates would counterbalance unexpectedly low liquidity.

On the other hand, borrowers have more trouble in meeting expected real debt service on variable-rate loans than on fixed-interest loans. For example, optimism about a drop in interest rates in the future could breed indifference to high current variable rates. If the borrower has only the option of a fixed-interest loan, the contract rate is crucial. It can therefore be argued that the level of interest-rate sensitivity at the time the loan is taken is lower with variable rates than fixed rates. Of course, interest rate changes have an impact in both instances. In the former case this is felt more through the impact on cash flow after the loan has been taken, but in the latter case it is felt beforehand, by influencing the *incentive* to borrow. This can be crucial for both monetary policy transmission and financial stability.

A qualification needs to be made that this distinction between loan forms is almost immaterial if fixed-interest loans can be prepaid from of charge and recapitalised on new terms. In reality, however, it is probably also important where there is a nominal right to cost-free prepayment. A borrower can rarely be certain about recapitalising a loan and some cost is always involved, e.g. in the form of borrowing charges.

### *Monetary policy transmission*

Since 1993 the Central Bank's main instrument for influencing economic activity has been the interest rate on its repos with credit institutions. This policy rate became even more important after the Bank's instruments were simplified in the first half of 1998. While its direct impact on the household sector and businesses is negligible, it affects other rates closer to the financial institutions, through 1) interest rate terms offered to corporate and household borrowers, 2) asset prices, 3) the exchange rate and 4) credit supply, over and above the impact of the interest rate changes themselves.[4] It is more straightforward to expect restrictions on the making of financial contracts to affect the transmission mechanism indirectly via the impact of policy interest rate changes on other interest rates rather than directly through the channels of the exchange rate, asset prices and credit supply. The interest rate pass-through is obviously greater i) the more impact that policy rates have on interest rates offered to households and businesses and other determinants of their behaviour; and ii) the more impact that interest rate changes (and their secondary effects) have on household and corporate behaviour. The main components of the interest rate impact are considered to be the impact on cash flow (disposable income of households after debt service, and business profits) and the intertemporal allocation of consumption (deferred purchases of goods become relatively more favourable when interest rates rise). However, the latter impact could equally be seen as a deterrent, since an interest rate rise temporarily deters buyers from completing their purchases. Policy rate changes seem to have a more immediately distinguishable effect on cash flow than on relative prices, but at the same time there is also a considerable impact through the asset price channel on household and corporate net worth.[5] It is tempting to conclude that the policy rate pass-through is stronger and faster if it affects interest rates (assuming they are changeable) applying to a large proportion of private sector debt, rather than if they only cause interest rates on new loans to change. However, the deterrent effect is likely to be stronger the more widespread that fixed interest rates are, since a given interest rate change would then have more impact on probable total debt service for the lifetime of a loan taken to finance the purchase of durables, equipment or real estate, rather than if it is deemed likely to be reversed soon afterwards. The same applies to the total impact on yields on securities competing with such investments: if interest rates are variable, raising them says relatively little about the earnings that the security will generate over its lifetime. It should be reiterated that banning indexed variable-rate loans would prompt some businesses to switch to exchange rate indexation, and

4. Convenient overviews of the action of a change in the policy interest rate include the survey by Kamin et al., for a BIS seminar in 1997 on the transmission mechanism of monetary policy in emerging market economies, and Thórarinn G. Pétursson. "The transmission mechanism of monetary policy", *Monetary Bulletin* 20014, pp. 62-77.

5. See, for example, data in The Bank for International Settlements: *National differences in interest rate transmission* (BIS 1994, CB 393).

thereby probably amplify the policy rate transmission through the exchange rate channel.

All the above implies that an increased proportion of variable-rate loans would amplify the monetary policy pass-through to cash flow but diminish it through the channels of relative prices and the exchange rate. The overall impact on monetary policy transmission is therefore not unambiguous. However, statistical studies from various countries suggest that, if anything, the impact of central bank instruments is transmitted more strongly. What complicated the picture is that if indexed variable-rate contracts were prohibited, they would be replaced by 3-4 loan formats: non-indexed with variable rates, indexed with fixed rates, exchange rate-indexed and even non-indexed with fixed rates. Thus it is far from certain whether changes in the policy rate would have an upward or downward impact on average interest rates within the credit system.

All told, the monetary policy transmission mechanism can be regarded as a lightweight factor in assessing whether to promote fixing of interest rates on indexed loans. A higher proportion of *non-indexed*, fixed-interest loans is generally a sign of greater confidence in monetary policy, but this is based market agents' volition rather than legal restrictions.

### *Financial institutions' risks and risk management*

Indexed loans with variable interest rates are probably more favourable for credit institutions from the point of view of risk and risk management if they are funded with indexed deposits. The reason is that even if all indexed deposits are at fixed interest they effectively have a shorter lifetime than loans. If the only available indexed loan format is fixed-rate, it would be riskier for credit institutions to allow themselves varying durations of indexed assets and liabilities, since the terms could not be synchronised immediately. Of course the risk would be reduced by abolishing indexed deposits while retaining fixed interest on indexed loans. Credit institutions would then need to finance this lending by issuing fixed-rate indexed bonds.

Generally speaking, if credit institutions' own or external risk management rules restrict imbalances between the asset and liability side with respect to price indexation, maturities and interest rate risk, it should not matter much whether they operate within a fixed or variable interest rate regime, or a mixture of the two. However, in a crisis the borrowers' risk would conceivably shift over to the credit institutions. If fixed-interest loans lead to more cautious borrowing, financial stability will benefit. Unrealistically optimistic expectations could raise the risk profile of fixed-interest loans, however.

Variable-rate and fixed-rate loan features become more homogeneous, the greater the scope for prepayment and low-cost refinancing. However, this could imply an additional risk for credit institutions.

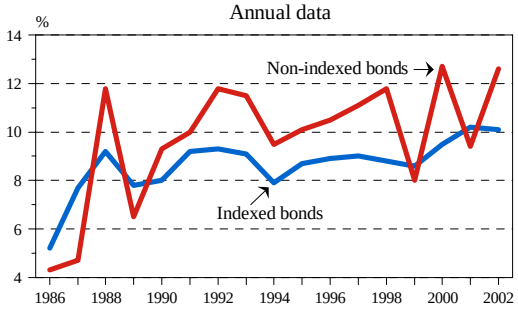
### *Interest rate levels*

In the long run the form of loan contract should not have any effect on the average real rate of interest since this is determined by underlying economic factors, especially the growth potential of the economy. Real interest rates on individual forms of loan, on the other hand, will differ depending on the distribution of risk between borrower and lender. This difference therefore reflects the risk premium in each case.

Of the four chief conceivable combinations of price indexation and interest rate variability, one of the most marked differences is between non-indexed fixed-rate loans and indexed variable-rate loans. If supply of indexed variable-rate loans were restricted, they would presumably be replaced mainly by indexed fixed-rate loans and non-indexed variable-rate loans. Interest rate data do not distinguish between fixed and variable-rate loans, but the real rate of interest on non-indexed formats has generally

Chart 1

Real interest rates on commercial banks' and savings banks' lending 1986-2002




*Source:* Central Bank of Iceland.

been higher in recent years and somewhat more irregular than on indexed loans, and there is an even more obvious difference between them in terms of the stability of debt service on them. This is clearly shown by Chart 1. Therefore, if variable rates are prohibited, there is clearly not much scope for increasing the share of non-indexed fixed-rate loans without causing generally more unstable debt service and higher realer interest rates.

Another factor to bear in mind is that it is not first and foremost variable interest rates as such that prove difficult for borrowers, but rather their interaction with income. Debt service that dropped in downswings and rose in upswings would obviously be considered favourable. Over the past decade and a half, real interest rates in Iceland have apparently tended to be procyclical, i.e. higher in upswings than in downswings, although caution is needed in drawing conclusions from a data period ranging from only one growth peak (1987) to the next (2000-2001). Such a correlation is also consistent with a contraction in demand for investment credit and durables purchases during downswings, while changes in capital supply are more uncertain and could even be procyclical. An addition factor operating in the same direction is that a central bank with an inflation target tends to be timely in easing interest rates and thereby causes real rates to decline during a recession, but rise during an upswing. If variable real debt service tends to run counter to income changes, this may be regarded as investor participation in borrowers' risk, which seems desirable, at least from the borrowers' viewpoint.

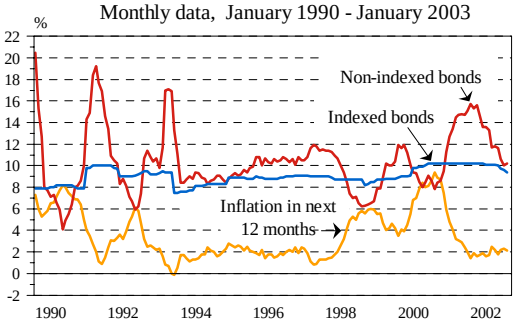
There appears to be evidence from Icelandic data, cf. Chart 2, and in fact US data since the early 1980s as well, of a short-term rise in real interest rates on non-indexed loans when the cycle turns downwards, as happened in Iceland after 1991 and again last year. This could easily happen if inflation gains momentum during or after the upswing and it takes time to rebuild investor confidence in non-indexed securities when inflation slows down. No secondary swing of this kind can be discerned in real interest rates for assets and liabilities at the start of a crisis (or an undershoot when inflation begin to rise).

A ban on indexed variable-rate loans would prompt businesses to switch to exchange rate indexation to some extent. If the Central Bank is reasonably successful in achieving its inflation target, the exchange rate will be a more likely source of volatility than variable rates on indexed loans are at present. Hence the above remarks about volatile real interest rates on non-indexed loans apply equally in such cases. Consequently, restrictions on the provision of variable-rate loans are unlikely to reduce corporate risk

Chart 2

Real interest rates on commercial banks' and savings banks' lending

Monthly data, January 1990 - January 2003




*Source:* Central Bank of Iceland.

It should be underlined that none of the arguments presented here suggest that a ban on variable-rate indexed lending would cause major problems. This is unlikely bearing in mind their relatively small share in household and corporate debt, the flexibility of credit and insurance markets and the similarity, in spite of everything, between real interest rates on different types of loan contract.

If variable-rate indexed loans were converted to either non-indexed or fixed-rate formats, the banks would also have to curtail their supply of indexed variable-rate deposits, so the return on them should drop. At the same time banks would try to attract savings into non-indexed deposits and indexed fixed-rate deposits and securities. The return on these asset forms would definitely need to rise relative to indexed variable-rate deposits. However, while it is less certain whether reducing interest rates on the latter would suffice, neither would returns on indexed fixed-rate loans and non-indexed variable-rate loans necessarily have to rise. Both supply of and demand for these types of deposit and lending would grow, leaving either event possible. In fact, there is a strong argument against an across-the-board reduction in the cost of finance: when a given loan form is pro-

hibited, the lost opportunity for matching borrowers' and lenders' wishes can prove costly. Even if average lending rates were to go down as a result of restrictions, this need not be a sign of lower total financial expenditures after allowance for risk.

## III Survey of indexed loans

In early spring 2002, the Central Bank's Statistical Division surveyed the fixed and variable interest rates charged by credit institutions on their indexed lending. The questions and answers were as follows:

*Are customers free to choose between fixed and variable interest rates on indexed loans, or do special rules apply?*

*Pension funds*: Most pension funds offer loans with variable interest rates, but only a handful with fixed rates.

*Insurance companies*: The bulk of lending is for car purchases, with variable rates.

*Investment credit funds*: Virtually all loans are at variable rates. The Housing Financing Fund, with its fixed interest rates, is an exception.

*Commercial banks and savings banks*: As a rule, fixed rates only apply to long-term loans with good collateral, e.g. a mortgage against real estate. At Íslandsbanki, customers generally have the choice between fixed and variable rates.

*Leasing companies*: No. Car loans are at variable rates but operating lease contracts at fixed rates. At Lýsing, however, all rates are fixed.

*Student Loan Fund*: Borrowers are not free to choose between fixed and variable exchange rates. Under current law, loans are at variable rates. Older loans were interest-free, however, i.e. with 0% fixed interest.

*How do the variable rates on indexed loans change?*

*Pension funds*: Interest rates are either linked to changes in housing bond yields or decided by the respective fund's board, often with reference to the lowest interest rates charged by credit institutions.

*Insurance companies*: Discretionary, with reference to rates of competitors.

*Investment credit funds*: Discretionary.

*Commercial banks and savings banks*: Discretionary.

*Leasing companies*: Discretionary.

*Student Loan Fund*: Interest rates are determined by the Government.

*Do fixed-interest loan agreements include review clauses? If so, what are they? What proportion of fixed-interest indexed loans include such clauses?*

*Pension funds*: Virtually never any review clause.

*Insurance companies*: Not applicable.

*Investment credit funds*: Only the Municipal Loan Fund has review clauses on part of its fixed-interest lending.

*Commercial banks and savings banks*: Only Íslandsbanki has review clauses (at 5-year intervals).

*Leasing companies*: A small proportion of loans have review clauses, in which case the review is made at intervals of 3-7 years.

*Student Loan Fund*: No review clauses.

Table 2 Indexed corporate and household lending December 31 2001

Breakdown into fixed-interest and other loans

| *Indexed corporate lending (%)* | *Fixed interest* | *Variable interest* | *Total* |
|---|---|---|---|
| Pension funds | 70 | 30 | 100 |
| Insurance companies | 20 | 80 | 100 |
| Investment credit funds | 7 | 93 | 100 |
| Commercial and savings banks | 56 | 44 | 100 |
| Leasing companies | 87 | 13 | 100 |
| Student Loan Fund | . | . | . |
| Total | 52 | 48 | 100 |

| *Indexed household lending (%)* | *Fixed interest* | *Variable interest* | *Total* |
|---|---|---|---|
| Pension funds | 13 | 87 | 100 |
| Insurance companies | 2 | 98 | 100 |
| Investment credit funds | 99 | 1 | 100 |
| Commercial and savings banks | 42 | 58 | 100 |
| Leasing companies | 38 | 62 | 100 |
| Student Loan Fund | 53 | 47 | 100 |
| Total | 74 | 26 | 100 |

*What rights of prepayment apply to fixed-interest indexed loans? What is the cost of prepayment to the borrower?*

*Pension funds*: All pension funds allow prepayment at any time, generally at no cost.

*Insurance companies*: Not applicable.

*Investment credit funds*: In most cases fixed-interest loans may be prepaid at no cost (the Regional Development Institute is an exception, with a 0.25% commission).

*Commercial banks and savings banks*: All loans may be prepaid. Commission ranges from 0-3%, depending on the institution concerned.

*Leasing companies*: Depends very much on the form of loan and business involved.

*Student Loan Fund*: All loans may be prepaid, at no cost.

*The final question concerned the amounts of indexed loans with fixed and variable rates for corporate and household borrowers respectively. The results are presented in Table 2.*