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Consumer Research Branch

Background papers on the BDPA (Borrowers and Depositors' Protection Act)

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# BACKGROUND PAPER

# RIGHTS AND REMEDIES

Eric Milligan
Consumer Research Branch
Department of Consumer
and Corporate Affairs,
Canada
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BACKGROUND PAPER
RIGHTS AND REMEDIES

This paper is divided into two sections:

Part I) - discussion of prepayment rights;

Part II) - discussion of civil remedies

Part I - Prepayment Rights

- Legal and economic background
- Prepayment rights in provincial law
- Limitations of provincial law
- Prepayment rights in federal law
- Limitations of federal law
- Finding a new approach - policy considerations
- There ought to be a law! - specific proposals

## Part I. PREPAYMENT RIGHTS

### Legal and Economic Background

Many consumers aren't aware that their right to prepay a loan is limited. A loan is always a matter of contract and in the absence of special terms, loan payments can be made only as specified (e.g. monthly). It is rare that a consumer has the chance to negotiate terms of a standard-form loan agreement.

Lenders want certainty in their loan portfolios; they want to be assured of a particular return on their investment and a "lock-in" provides some of this assurance. Lenders also must be able to "match" the source (deposit or note obligations) with the application (loans) of their funds. An imbalance either way could jeopardize the financial structure of the institution.

Theoretically, the increased security which prepayment restrictions provide to lenders allows them to charge a lower rate to consumers. Any changes in the position of lenders which increases their risks will result in either a lessening of their profit or an increase in the cost of credit to consumers or both.

Balanced against this simple "business fact" is the understanding that credit can be dangerous if used unwisely. Credit-related problems can be potently destructive. To paraphrase an advertisement by a well-known lending institution: "never borrow money needlessly, but when you must - pay it back as soon as you can!"

It is felt that consumers should not be barred from paying their obligations and retiring their loans whenever they are able to do so.

Legislators have two avenues which can be followed in this area. They can "adjust" the general rights of consumers in prepayment situations in such a way that the lender cannot meet the "loss" which results from the prepayment period. The expected result of this approach will be a general increase in the cost of credit to all consumers. Those who do not take advantage of the prepayment right will, in effect, subsidize those few who are fortunate enough to be able to scrape up enough money to pay off their loans in advance.

A second alternative is to find some method of allowing a lender to recover (from the person who is prepaying) the "loss" which he experiences when the loan is prepaid. This means that a penalty for prepayment would apply in virtually every case. While only those who seek to take advantage of the prepayment right would bear the cost, a general impediment to early payment of credit obligations would be established.

Canadian legislators have adopted a combination of the "cross-subsidization" approach typified in the first example and the "user pay" approach of the second example.

## II. PREPAYMENT RIGHTS IN PROVINCIAL LAW

Long ago, the provinces recognized the social utility in allowing consumers favourable prepayment terms. The provincial consumer protection acts most often deal with prepayment in a limited situation - where the "interest" portion of the loan has been added to the principal sum at the outset of the loan.

This type of loan is referred to as a "precomputed loan" as opposed to "interest bearing" (which implies calculation and

accrual of interest on an ongoing basis throughout the term of the loan).

Two Basic Rights

Provincial legislation usually sets out two important rights:

1) it allows pre-payment at any time, preventing the operation of "lock-in" clauses;
2) it restricts the interest penalty which a lender can extract for prepayment.

Doing away with "lock-in" clauses is self-explanatory; restricting prepayment penalties deserves a closer look.

Limiting interest penalties

If the loan has precomputed interest, any acceleration clause will accelerate not only the principal but also the full amount of "interest". The consumer would be required to pay "interest" for the full duration of the loan as per the agreement even though he did not use the lender's money for that period. Prepayment early in the life of the loan in such a case would obviously give the lender a windfall of "unearned interest".

Provincial law proceeds on the basis that a lender should only be entitled to "interest earned" up to the date of prepayment. "Unearned interest" cannot be recovered from the consumer.

Determining "earned interest" - the Rule of 78's

But how much is "earned" if the interest has been precomputed? All the provinces use a formula known as the "Sum of the Digits" method or "the Rule of 78s" to determine the "earned interest" to the date of prepayment. The technical aspects of the formula need not be discussed at this point. What is important to remember is that the Rule of 78s is a method of determining the portion of the cost of borrowing to be paid by a consumer who wants to prepay a "precomputed" loan.

The details of the formula can vary somewhat. Different factors can be added or adjusted and the formula actually differs from province to province.

## Bias in the Rule of 78 - Advantage to the Lender

The Rule of 78s results in a "weighting" of interest recovery. Compared to the "interest bearing" method, the use of the Rule of 78s allows a disproportionate recovery of "interest" in the early stages of the loan. The consumer is at a disadvantage if there is early prepayment. The later the prepayment, the more equivalent the recovery between the two methods of calculation. But there is always a bias.

A high interest rate adds to the problem of interest earnings under the Rule of 78s. Consumers who wish to make early prepayment of high rate loans can end up paying several hundreds of dollars more by way of "earned interest" under the Rule of 78s. (See appendix)

## Additional Charges Allowed

Provincial legislation contains a second feature in prepayment situations - lenders may impose a flat fee to cover certain of their "fixed costs". There is a recognition that every loan involves some "administrative costs", and costs of "origination". Further, every prepayment disrupts the expectations and investment plans of the lender, requires additional administrative costs, and generally increases the cost of providing credit services to consumers.

The provincial legislative response to these factors has been provisions allowing lenders to charge an additional fixed dollar amount or flat percentage of the rebate of "unearned interest" as determined by the Rule of 78s. This sum is not really "unearned interest". It is allowed in addition to the "earned interest" as determined by application of the formula.

## III. LIMITATIONS OF PROVINCIAL LAW

Provincial law was obviously not intended to cover every type of lending transaction. In some provinces no general right to prepay is given, in some, the regulation of "earned interest" is limited solely to "precompute" situations.

Provincial law generally does not apply to mortgage transactions, although the Province of Ontario does have a Mortgage Act which sets out prepayment rights identical to those contained in the Federal Interest Act. These rights are limited and are subject to the same defects as those in the Federal legislation (to be discussed).

The use of the Rule of 78s puts consumers at a disadvantage in many prepayment situations. The formula is biased in favour of the lender. Individuals who prepay loans end up paying more than they might have to under alternate methods of calculating the "earned interest".

## IV. PREPAYMENT RIGHTS IN FEDERAL LAW

### Small Loans Act - Content

The Federal Small Loans Act is limited in its general application to loans of money amounting to less than $1500.00. For such loans, however, the "precompute" is not allowed.

Borrowers are given an absolute right to prepay loans at any time without notice, penalty, or bonus.

Once again, the issue of "earned interest" comes up. However, neither the Act nor its regulations specify a method of calculating the amount. In practice, the Rule of 78s is not followed. Such an approach would be inconsistent with the "interest bearing" calculation method imposed for Section 6 of the Act. Identical procedures apply to Small Loans Companies under Part II of the Act.

### Small Loans Act - Limitations

The Small Loans Act utilizes a method of interest calculation which is, perhaps, more fair to consumers who wish to prepay. Unfortunately, the protection is limited to consumers who borrow less than $1500.00 or who deal with licensed company. Statistics have shown that the proportion of consumer loans made under the Small Loans Act has declined steadily over the past 15 years and in 1975 (latest data available) represented only 1% of the total value of consumer loans in Canada. The protection is small comfort to most borrowers.

Interest Act - Content

The Federal Interest Act contains provisions specifying prepayment rights for loans secured by mortgages on real property. Unlike the Small Loans Act, it contains no monetary limit for application of the legislation.

Section 10 of the Act gives the borrowers the right to prepay mortgages any time after the expiration of 5 years. Thus, "lock-ins" of greater than five years are not allowed.

No further interest (other than that owing at the time of prepayment) is allowed, but a maximum penalty of 3 months interest is authorized.

Interest Act - Limitations

A major limitation is that the prepayment section only applies to mortgages with terms greater than 5 years.

The response of lenders has been quite straight-forward. Most mortgages are written with terms of exactly five years - no more. The application of the section is then avoided completely. As a result, the prepayment rights, limited as they are, are only available to a handful of consumers.

FINDING A NEW APPROACH - POLICY CONSIDERATIONS

To review at this point, there are significant "gaps" in the prepayment rights given to consumers through both federal and provincial legislation.

1. Mortgages - the Federal law is deficient. It only deals with prepayment rights in mortgages greater than five years and few mortgages are written on that basis. The little Provincial law that deals with this subject duplicates exactly the approach and therefore the deficiencies of the federal legislation.

2. Non-Mortgages - once again the Federal law is deficient. The Small Loans Act is limited in application, covering only 1% of outstanding consumer credit in Canada. The Provincial law has wider application but is limited in another way. A general right to prepay is not universal, regulation is sometimes tied to precomputed loans and generally utilizes a formula which is biased in favour of the lender.

What is needed are proposals which are carefully designed to allow an equitable and general prepayment right. Prepayment should be facilitated but the lender should not be placed in a position where it is no longer economic to make credit available to consumers.

Not all types of lending transactions are the same; some distinctions should be made:

1. Short Term vs. Long Term loans

   This distinction is important when considering the "funds matching" problem discussed briefly above. Short term loans inherently reduce the matching problem and this should affect the approach taken when determining prepayment rights.

2. High Rate vs. Low Rate Loans

   This distinction only has meaning with regard to some sort of "norm". It can be argued that decreasing levels of prepayment restriction should be applied as the interest rate climbs above a "norm" (reference rate). The High rate loans market also sees less fluctuation of rates; the risks inherent in prepayment are lower.

3. High Origination Cost vs. Low Origination Cost

   As a general rule it can be said that the greater the size and the longer the term of the loan, the higher the cost of origination. The amount of protection which a lender requires increases with the amount and term of the loan and this naturally leads to greater cost.

   Of particular importance in this situation is the complexity of the security arrangements which might be required. In these types of loans, prepayment is likely to give rise to a greater "loss" to the lender and the inequitities inherent in the "cross-subsidization" approach are heightened.

It would be foolish to prescribe a standardized prepayment right for all types of loans. The distinctions listed above must be kept in mind and differentiation will be required.

There are some underlying premises:

1. As a general rule, consumers should be able to satisfy their obligations through prepayment in the most cost-efficient way possible.

2. Consumers should be granted a general right to prepay. "Lock-ins" should not be allowed.

3. Lenders should only be entitled to the "interest" earned up to the date the loan is paid out - based on the accrual method.

4. Prepayment Penalties should be allowed only where the loss to the lender as a result of a prepayment could be significant.

5. Any prepayment penalty should be limited to a fair approximation of the present value of the loss to the lender.

THERE OUGHT TO BE A LAW! - SPECIFIC PROPOSALS

The approach adopted in BDPA takes into account the factors discussed above. General facilitation of prepayment (which involves some degree of cross-subsidization) is focused on the usual "consumer loan" (i.e. unsecured by real property) and on high rate mortgages.

Common to both categories are rates which are higher than those which apply to other types of lending transactions. Consumer loans are predominately short-term and the risks involved in "matching funds" are significantly reduced since the source of funds to lenders are also short-term. In addition, origination costs are relatively minor.

The terms and origination costs of high rate mortgages are more likely to support arguments in favour of greater restriction on prepayment. However, the "high rate" aspect of this category outweighs the other factors. Lenders can very easily substitute high rate mortgages (i.e., seconds, thirds, etc.) for normal consumer loans and thus effectively circumvent the liberalized prepayment rules applying to consumer loans.

A more restrictive approach is proposed for "low rate" mortgages. In this category all the factors of long term, low rate, and high origination costs combine to form a strong argument in favour of allowing lenders recovery of the "loss" occasioned by prepayment (the "user-pay" approach).

Further, low rate mortgages have many close substitutes in the form of corporate bonds and other corporate debt obligations. As such, major deviations of mortgage conditions away from conditions applying to corporate borrowing will have a significant effect on the availability of mortgage financing for consumers. For these reasons, prepayment penalties must be allowed in the case of low rate mortgages.

Two factors are common to both sets of lending transactions, however.

1) Consumers are given the right to prepay at any time without notice. "Lock-ins" are not allowed.

2) The "interest bearing" or accrual method of calculation is standardized for all lending transactions. Precomputed credit charges are not allowed.

CONSUMER LOANS AND HIGH RATE MORTGAGES

The proposals embodied in BDPA link "consumer loans" (more correctly called non-mortgage transactions) and high rate mortgages. The "norm" for high rate mortgages is fixed at 4 percentage points above a reference rate which is to be specified by way of regulation. This point-spread remains constant but the reference rate can vary according to market conditions.

Prepayment can be made for both consumer loans and high rate mortgages at any time without notice.

The credit charge payable at the time of prepayment is limited to the amount which has accrued up to that date. This approach is completely consistent with the "interest bearing" method of calculation adopted in BDPA.

The BDPA proposals also prevent the imposition of any penalty on prepayment. A "penalty" under BDPA is a charge distinct from a "credit charge" and therefore both avenues must be closed off.

The net result will be that consumers will be entitled to prepay these types of loans at any time without notice or penalty and the consumer will only be obligated to pay the cost of borrowing incurred to the date of prepayment ("earned interest"). This sum will be calculated using the "interest bearing" or accrual method. The Rule of 78s will not be allowed: there will be no hidden bias in favour of the lender.

The utilization of the accrual method for calculating "earned interest" and the ban on penalties will mean that any loans to lenders through prepayments must be borne generally. This method is feasible because such losses are likely to be minimal. The proposals operate in best interests of consumers generally because the costs of any cross-subsidization will be less than the costs of trying to impose the sophisticated penalty scheme that would be required through the other approach.

LOW RATE MORTGAGES

The details of prepayment rights with regard to low rate mortgages are considerably more complex and have been dealt with in detail in a separate background paper.

In summary, consumers will have the right to prepay on any normal monthly payment date without notice. "Lock-ins" will not be allowed. Consumers will only be responsible for the credit charge ("earned interest") earned to the date of prepayment. Once again, this approach is consistent with the credit charge calculation method specified in the legislation.

In certain circumstances, a penalty can be charged, however. The amount of the penalty is based on a formula which is designed to reflect the "present value" of the loss to the lender that can reasonably be expected to result from the prepayment. This penalty is a function of the time left to the end of the mortgage term, the amount of the payment and the relationship between the contract rate and prevailing market rates for similar loans.

The provisions are designed to completely supercede the current Interest Act provisions and will provide consumers with prepayment rights from the very onset of the lending transaction.

The "user pay" approach adopted in this case is required because the cost to lenders of prepayment could be significant in some cases. These costs would ultimately effect individual consumers through high loan rates or a general reduction in credit available for residential mortgages. Since neither result would be desirable, a penalty scheme giving lenders a fair approximation of their loss is in the best interests of consumers.

Part II - Civil Remedies

- Why have civil remedies?
- When are they appropriate?
- The decision
- An important distinction - enforcement vs recovery
- Existing provincial law
- Existing federal law
- Policy consideration
- Specific proposals

## PART II - CIVIL REMEDIES

### Why have civil remedies?

There isn't much sense in having a law unless it is going to be followed. Purely declaratory legislation establishes norms of conduct, rights and obligations without the means to ensure that they are actually implemented. It is "toothless" in the sense that it cannot be enforced (except perhaps through the all but forgotten inherent right of the Crown to maintain an action to prevent violation of legislation).

The most common method of ensuring continuing adherence to the law is the use of prosecutions. Yet experience has shown that reliance on prosecution is not sufficient to curtail the incidence of violations of consumer protection legislation.

A less common, but equally acceptable method of ensuring that the requirements of regulatory legislation are met is the establishment of "civil remedies" which give individuals the right to bring private actions for relief based on non-compliance with the law.

The move now is toward greater use of "civil" methods. Combined with this has been a decision that individual consumers who are subjected to violations of the law should be given a civil right of action.

When are they appropriate?

Whether or not a civil right of action consequent on breach of the legislation is appropriate depends on several conditions:

1) Could the potential violation result in direct harm to individuals?

2) Could the harm possibly be "serious" in any specific case?

3) Can the individual obtain "recovery" in any other way, on any other basis in law?

4) Will a "public law" enforcement tool such as prosecution be enough by itself to keep the incidence of violations (and consequent harm to individuals) to a "tolerable level"?

5) Should the public tolerate any amount of unsatisfied loss by individuals as a result of illegal activity in the regulated area? Should every loss be potentially recoverable?

The decision

No government legislating in the consumer credit field has accepted the arguments that legislation should be purely declaratory or should rely solely on prosecutions or other "public law" methods. Every jurisdiction in Canada has made some assortment of civil remedies available.

An important distinction - Enforcement vs. Compensation

The term, "civil remedy" really refers to the legal process which is utilized to obtain adjudication of rights. These are distinct from matters taken care of through criminal processes.

Reliance on a common legal process tends to hide the fact that some of the so-called "remedies" are quite different from others. In many cases, the right under civil remedy goes far beyond mere compensation for actual loss suffered by an individual.

A good example would be violations of disclosure requirements or unconscionable transactions relief provisions. In such cases the remedy may be a reduction in the cost of borrowing, a right to withdraw from the transaction or possibly the extinguishment of the consumer's legal obligations (with the benefits he has gained remaining unaffected).

The consumer's right to bring an action for this type of relief, need not involve proof that the loss was the result of the violation nor that the activity affected the behaviour of the consumer in the transaction. Mere non-compliance is sufficient.

Since these types of remedies go beyond mere compensation for loss, they should properly be viewed as being enforcement-oriented. The potential of their utilization by consumers supplements the deterent effect of the prosecution power. Some would argue, in fact, that the greater threat and therefore the greater deterent lies in the existence of the civil remedies.

The right to recover losses suffered by reason of the actions of another is basic to the law of all provinces in Canada. Whether or not a specific loss can be recovered is dependent on many factors, however. Who suffered the loss? What was the relationship between the parties? What was the type and extent of the loss? What was the activity in question? Was a standard of conduct violated?

The last question is particularly crucial in this instance. Standards of conduct in the Consumer Credit field have existed in both federal and provincial law for years. Specific remedies linked to violations of certain of these standards are also common in all jurisdictions.

It is only a small step (and one entailing no departure in principle) to allow recovery of damages for violation of any of the regulatory norms established in the legislation.

In fact, providing relief on this rationale is more supportable since it is restricted to actual loss suffered by a consumer who must be able to demonstrate that it arose from the illegal activities of a lender. The test is more strict, the degree of recovery more limited, the parameters more closely attuned to the actual situation between the parties.

Existing provincial law

Every province prescribes sanctions for violation of its consumer credit legislation. The penalties vary somewhat but they generally can be termed "light to moderate".

The criminal enforcement power is buttressed by enforcement-oriented civil remedies. The most common of these is the right to relief where the lending agreement used does not meet the disclosure requirements set out in the legislation. However, not all provinces allow such relief.

The exact nature of relief varies even when it is allowed. B.C. and Ontario, for example, state that such an agreement is "not binding". (This concept has never been clarified and there is general disagreement as to the rights of the parties in such a situation.) Quebec allows the consumer to either nullify the contract or elect to continue with it on an "interest-free" basis.

In some cases the provincial legislation is internally inconsistent. In B.C., for instance, the consumer's remedy can theoretically be determined either by relying on the "executory contracts" provisions of their C.P.A. or on the credit-disclosure sections. Apparently, they are both applicable in the same instances yet the results are quite different.

Unconscionable transactions relief legislation exists in all provinces. The tests set out vary considerably from jurisdiction to jurisdiction and on the whole, the track record of consumer successes has been dismal. In the common law provinces what was an attempt to codify the law of equity specifically for credit transactions has backfired. The court cases indicate that arguments of unconscionability outside the Acts are more powerful, more likely to bring relief for consumers. What little experience there has been under the new trade practices legislation indicates only a marginal improvement in this situation.

The analogous Civil Code provisions in Quebec are supplemented by a test contained in section 118 of the Consumer Protection Act. The Civil Code provisions apparently are more effective than those in the CPA and have been used with good results. In this respect, at least, Quebec's experience with the efficacy of specific legislation vs the larger back-up of law is consistent with that of the other provinces.

No province has enacted provisions allowing a general right to damages for loss suffered as a result of violations of consumer credit legislation. This could be due to a feeling that the specific remedies already provided are sufficient, or that the exposure to business would be too great or that the standards of the test would be too onerous for consumers.

All in all the general picture of consumer redress through provincial law is a mess. Some provinces offer a logical package of relief; in others the rationale is hard to find.

Federal law

As confusing as the provincial approach seems to be, it is a veritable paragon of reason and symmetry compared to the federal situation. The best probable explanation for this state of affairs is the constitutional problem. The civil remedy "eggshell" has been trod every so lightly - until now.

Small Loans Act

The Small Loans Act regulates the maximum cost of loans under $1500. No disclosure provisions are set out so the remedies are understandably more limited. Criminal prosecution is, of course, provided. In addition, the Act allows a court to exercise powers somewhat similar to those found in the provincial Unconscionable Transaction Relief legislation in instances where the rate ceiling has been exceeded. The court is empowered to reduce the consumer's obligation to the proper rate and can tinker with any security given under the loan.

While this approach is true to the "compensation" approach to civil remedies it is only a skeleton of the relief offered by some provincial legislation in similar circumstances.

While the Small Loans Act doesn't provide a general right to damages for losses suffered through violations, such a provision isn't really necessary. The only provision that gives any concrete protection to consumers is covered by a specific remedy.

Well, not quite. There is a catch. The Act also provides for the incorporation of Small Loans Companies, and while they are subject to the same rate ceilings, there is no civil remedy available to consumers who deal with them. Presumably, the threat of winding up (s18) was enough to prevent even a random violation!

Interest Act

The federal Interest Act has a little more meat in it - but not much. If somebody forgets to fill in the interest rate in a loan agreement section 3 in the Act states that it should be set at 5%. (In some provinces, the same failure would reduce the rate to 0%.)

For non-mortgage loans, failure to disclose the interest rate on an annual basis will result in a reduction of the rate to 5%. In the case of mortgages, more or less the same error will reduce the rate to zero. Finally, an internal in consistency in any mortgage disclosure will result in the lower of the rates applying.

In all 4 cases the error amounts to misdisclosure. The remedies obviously aren't attuned to compensation yet there is no consistency of approach from an enforcement point of view.

Sections 5 and 9 of the Act amount to the closest thing to a general damages section seen yet. They state that a person can recover or set-off any amount he was not obligated to pay under the relevant provisions of the Act.

## Policy considerations

Surely the consumer is not served by such a confusing and conflicting array of civil remedies. There is no continuity of approach, no clearly thought out basis for deciding where a civil remedy is appropriate or what form it should take. Inconsistencies, between federal and provincial offerings are compounded by internal meanderings in some jurisdictions.

It would be wise to start with some basic premises again:

1) Consumer credit legislation should not be merely declaratory. An efficient means of ensuring that it is adhered to must be prescribed.

2) Criminal prosecution should be supplemented with enforcement-oriented civil remedies.

3) Consumers are entitled not only to general protection under the law but also specific recovery of losses suffered as a result of illegal activity.

4) As a rule, consumers should be allowed compensation for actual loss only. Variations from this should be limited to situations where the legal complications would make proof of a case very difficult or where deterence of such activity on a general basis is of prime importance.

## Specific Proposals

### General right to damages

The foundation of the BDPA proposals is the generalized damage action found in s.35 of the Bill.

In a direct departure from existing federal and provincial consumer credit law, the consumer is given the right to bring an action for damages to compensate for loss suffered as a result of conduct in violation of the legislation. This is a provision of major consequence. (Unfortunately, it is probably unconstitutional and will have to be limited to the provisions of the Act not based on the criminal law head of the BNA.)

A corollary provision allows recovery of monies paid which were not liable to be paid under the provision of the Act. This section, which is intended to re-enact the existing Interest Act remedy, is not merely a restatement of the general right to damages for loss. It is arguable that monies paid under a mistake as to one's obligations in law would not be recoverable. Many of the operative sections in the act state that a consumer is not liable to pay this or that but do not specifically contain words granting a right of action to retrieve monies paid.

At this point, the basis of consumer redress founded on the "compensation" approach has been established. Any other civil remedy provisions are either specific variations of the "compensation" theme or contain a punitive potential which identifies them as being enforcement-oriented.

Disclosure remedies

Disclosure provides a fertile ground for establishing specific remedies. Any violation of these provisions amounts to a mis-disclosure which might or might not mislead a consumer. Although the basic concept of "compensation" prevails, there are some departures.

For instance, if there is a failure to make "full" disclosure or if a copy of the lending agreement is not delivered (which more or less amounts to the same result) the credit charge (cost of borrowing) is reduced to the prime rate.

This is not as punitive as reducing the rate to zero (as is done in some provincial legislation) but it still deprives the lender of any profit he might otherwise have obtained by his illegal act. In some cases, the lender will take an actual loss since his cost of funds can be greater than prime.

This remedy clearly will give a consumer more than the loss suffered by reason of any mis-disclosure.

To "temper" the punitive aspect and bring the remedy closer to the "compensation" approach, a caveat is added. The reduction of the credit charge rate will not be available if the court finds that the mis-disclosure "was not of such a nature as to be likely to mislead or deceive the borrower to his disadvantage."

Remedies for exhorbitant credit rates

BDPA's unwarranted rate provisions present an attempt to provide the individual consumer with specific relief against credit rates that are out of line. It does have, however, important potential for generally ensuring that exhorbitant rates are not charged.

The provisions use as a foundation the unconscionable transactions relief legislation of the Common Law provinces. The assessment of the transaction, however, is not based on the wide grounds found in the provincial law. The federal approach (for constitutional reasons) focuses on the "fairness" of the rate charged.

The court is only allowed to consider specific aspects which could have some direct bearing on the determination of the rate. To this extent, at least, the federal approach is more limited than that of the provinces. This limitation is, however, counteracted somewhat by other factors that represent an improvement over provincial law.

One of the major problems with the provincial legislation in this area has been the language used to set out the powers of the Court and the test to be utilized. It has been so open that the Courts have felt obliged to restrict its application and scope.

BDPA takes the approach first established in provincial trade practices legislation. It specifies the criteria in detail, giving the courts solid "handholds" to use in assessing the propriety of the rate charged. It is hoped that the greater specificity will move courts to a more enlightened approach regarding consumer relief in this area.

Finally, and most importantly, a major departure from the usual approach in this area is the shift of the onus of proof from the consumer to the lender. There are several good reasons for this change.

Courts are, on the whole, reluctant to interfere with a bargain made between two parties. This basic reluctance operates to the disadvantage of a consumer arguing for this type of relief, whether it be under federal or provincial legislation. The parties don't start off in an equal position at all. The legal deck is loaded against the consumer from the very start.

Shifting the onus of proof tends to counteract this inherent bias in the law. It is, admittedly, only a procedural move and isn't as good as eliminating the bias altogether. Unfortunately, that cannot be accomplished through any sort of legislation.

A second and equally important reason for the new approach is the information problem facing a consumer in this type of situation. The lender is probably a professional in the area, operating full-time. He has a much greater ability to gather information bearing on the criteria set out in the test. In some cases, he may have a virtual monopoly on it.

The onus shift relieves the consumer from the almost impossible task of fighting the natural advantage possessed by the lender. Contrary to some opinions, it is intended to rebalance the position of the parties in the situation. It should put them on an equal footing and allow the courts to make a fair decision unfettered by counter productive restrictions which are unfair to one side or the other.

The BDPA approach to civil remedies is consistent with the premises set out earlier. The mere existence of any such remedy has a deterent effect. An effective basic right to gain compensation for loss is given and where the consumer is not likely to be on an equal footing in any dispute, provisions are introduced to rebalance the situation. Remedies which may allow more than mere compensation are used in key areas where general adherence to the legislation is crucial to its central purpose.

# A P P E N D I X

August 11, 1977.

## BALANCE DUE ON $1000 LOAN: TRUE AND PER "RULE OF 78's"

| TERM OF LOAN: n MONTHS | LOAN PREPAID AFTER k MONTHS | E.A.R. - 12% BALANCE TRUE | E.A.R. - 12% BALANCE PER "78's" | E.A.R. - 12% PENALTY | E.A.R. - 24% BALANCE TRUE | E.A.R. - 24% BALANCE PER "78's" | E.A.R. - 24% PENALTY |
|---|---|---|---|---|---|---|---|
| 12 | 3 | 760.52 | 760.86 | .34 | 769.79 | 771.02 | 1.23 |
| | 6 | 514.16 | 514.48 | .32 | 526.86 | 528.02 | 1.16 |
| | 9 | 260.72 | 260.86 | .14 | 270.51 | 271.02 | .50 |
| 36 | 3 | 929.03 | 930.43 | 1.40 | 939.06 | 944.12 | 5.06 |
| | 6 | 856.02 | 858.36 | 2.34 | 874.75 | 883.25 | 8.50 |
| | 12 | 703.65 | 706.71 | 3.06 | 735.28 | 746.53 | 11.25 |
| | 24 | 371.74 | 373.38 | 1.64 | 407.03 | 413.20 | 6.17 |
| 60 | 12 | 842.59 | 849.75 | 7.16 | 875.75 | 901.84 | 26.08 |
| | 24 | 666.29 | 674.63 | 8.34 | 721.69 | 752.76 | 31.07 |
| | 36 | 468.84 | 474.63 | 5.79 | 530.64 | 552.76 | 22.11 |
| | 48 | 247.69 | 249.75 | 2.06 | 293.75 | 301.84 | 8.09 |
| 84 | 12 | 900.88 | 912.25 | 11.37 | 931.58 | 972.40 | 40.82 |
| | 24 | 789.87 | 806.13 | 16.26 | 846.74 | 906.39 | 59.65 |
| | 36 | 665.54 | 681.65 | 16.11 | 741.53 | 801.95 | 60.42 |
| | 48 | 526.28 | 538.79 | 12.51 | 611.08 | 659.09 | 48.01 |
| | 60 | 370.32 | 377.56 | 7.24 | 449.31 | 477.82 | 28.51 |
| | 72 | 195.64 | 197.97 | 2.33 | 248.73 | 258.12 | 9.39 |

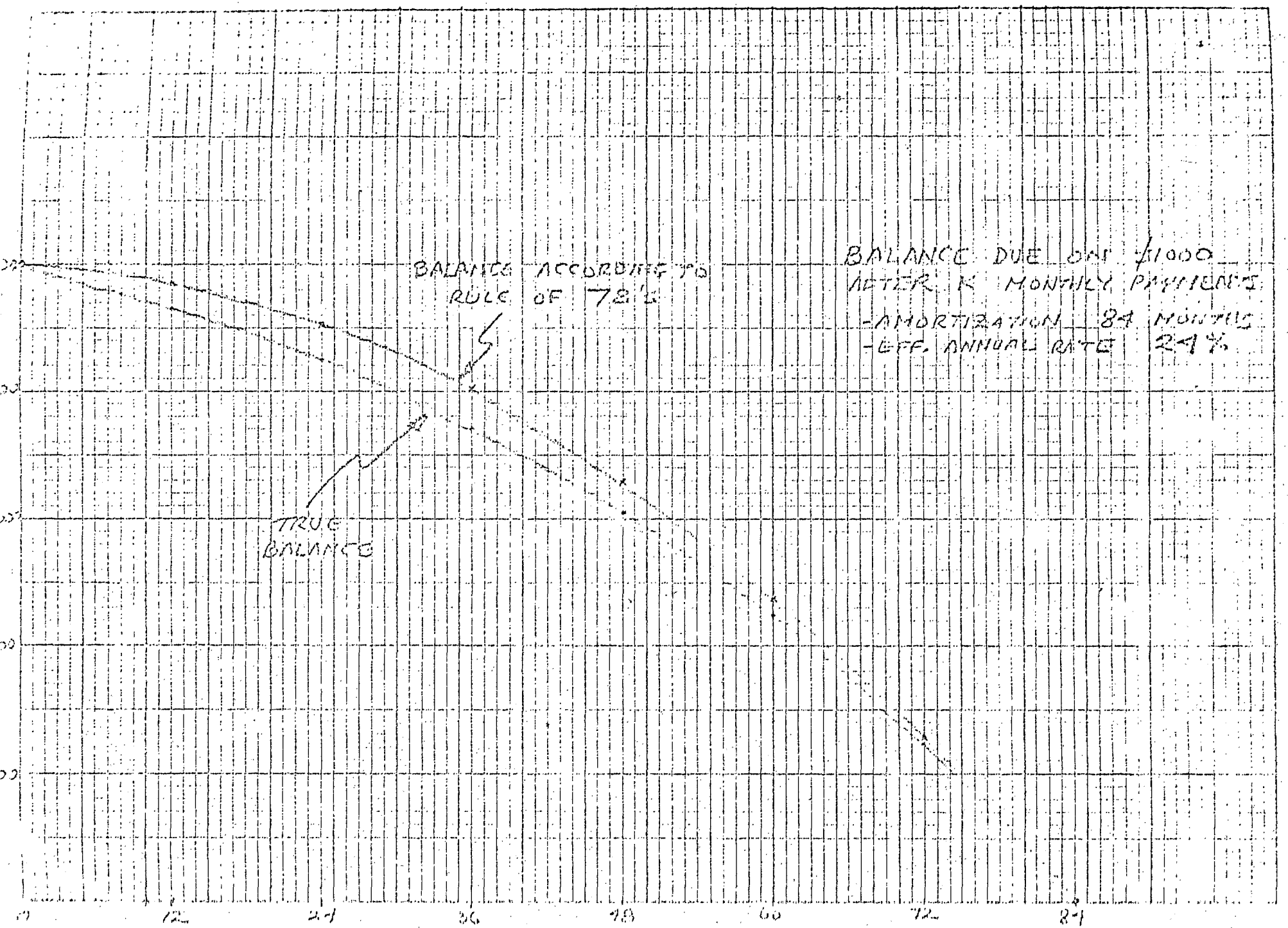
$B_o$ = \$ 1000 P = \$ 23.24

n = 84 (23.244167)

EAR = 24% - $\therefore$ $i = (1.24)^{1/12} - 1 = .018087582 = 1.81\%$ per month.

BALANCE DUE AFTER r MONTHS

| k (MONTHS) | UNDER RULE OF 78's | UNDER DECLINING BALANCE METHOD | "PENALTY" |
|---|---|---|---|
| 0 | 1000.00 | 1000.00 | 0.00 |
| 1 | 999.17 | 994.84 | 4.33 |
| 6 | 991.00 | 967.63 | 23.37 |
| 12 | 972.40 | 931.58 | 40.82 |
| 18 | 944.20 | 891.44 | 52.76 |
| 24 | 906.39 | 846.74 | 59.65 |
| 36 | 801.95 | 741.53 | 60.42 |
| 48 | 659.09 | 611.08 | 48.01 |
| 60 | 477.82 | 449.31 | 28.51 |
| 72 | 258.12 | 248.73 | 9.39 |
| 84 | 0.00 | 0.00 | 0.00 |


BALANCE ACCORDING TO RULE OF 78's
TRUE BALANCE
BALANCE DUE ON $1000 AFTER K MONTHLY PAYMENTS
-AMORTIZATION 24 MONTHS
-EFF. ANNUAL RATE 24%
0
12
24
36
48
60
72
84
K = MONTHS

# IMPLEMENTATION ADMINISTRATION

## BACKGROUND PAPER

Consumer Research Staff Study

Eric A. Milligan
August 1, 1977

# BACKGROUND PAPER/IMPLEMENTATION ADMINISTRATION

## PART I. - Implementation:

This section will explain where and to whom the act will apply.

## PART II. - Administration:

This section who will do what.

## PART I- Implementation:

### Avoiding Duplication

The consumer credit field is an area of shared jurisdiction in Canada. The provinces have the ability to legislate under the heading of Property and Civil Rights. The Federal Government has the ability to legislate under the headings of Banking, Interest and its criminal law power.

When both levels of government attempt to legislate in an area of shared jurisdiction special care must be taken so that the legislation "meshes". Duplication doesn't make any sense. Conflict would be counter-productive. The BDPA has been designed so that it doesn't need to be imposed on a province that has, through its own laws, provided an equivalent level of protection for its consumers.

### Ensuring that Banks are covered

The only exception to this arises from the uncertainty as to whether federally chartered banks are subject to provincial consumer credit legislation. The BDPA Implementation Plan calls for the federal legislation to be applied to banks in each province so that they will be clearly governed by valid federal legislation. This legislation will be "in balance" with provincial legislation, and the result will be that neither federal nor provincially administered financial institutions will be at a competitive advantage in the market place.

### Division of the Legislation

In order to accomplish this goal the Bill has been divided into two parts. Part 1 includes provisions intended to re-enact and update existing federal law based on the Interest Act, Small Loans Act and Pawnbrokers Act. Part 2 includes those provisions which have caused the greatest concern to the provinces and which, to a large extent, overlap existing provincial legislation.

Part 1

The intention is to proclaim Part 1 for the entire country as quickly as possible after the Bill is passed in Parliament. Part 1 contains sections dealing with tax rebate buyers and loansharks and there is a clear need to make this portion of the legislation effective as quickly as possible.

Part 2

Part 2 is quite another matter. Much of the effect of Part 2 is determined by the content of the regulations which must be passed. Federal/provincial consultations will focus on the details and standards of protection in the consumer credit area; the results of these consultations will form the basis for the regulations under Part 2 of the BDPA.

The idea is that these same standards will be taken back by the provinces and incorporated in provincial legislation.

Commonality of Standards

If everything works out properly, the federal legislation will use standards which will be parallelled in provincial legislation. There will obviously be some variations but the greater the similarity, the fewer the problems for everybody.

In each province where there is the similarity of protection afforded to consumers, the provisions of Part 2 of BDPA will not be proclaimed except in respect of the federally chartered financial institutions.

Provincial law will be the only law of general application in the province and will be the primary source of protection in the consumer credit field.

Listing of Part 1 Provisions

Part I will contain the following provisions:

1. Criminal rate, criminal collection practices and administration and enforcement provisions.

2. Interest Act provisions - (re-enacted and revised)
   - judgment debts
   - penalty provisions
   - rate calculation methods
   - mortgage pre-payment

3. Small Loans Act provisions - (re-enacted and revised)
   - non mortgage pre-payment
   - penalty provisions

4. Deposit provisions.

Listing of Part 2 Provisions

Part II will contain the following provisions:

1. Advertising provisions - lending transactions
2. Disclosure provisions - lending transactions
3. Advertising provisions - deposits
4. Disclosure provisions - deposits
5. Unwarranted rate
6. Civil remedies
7. Provision of statements
8. Notice of Assignment

Consultations

Although federal/provincial consultations will focus primarily on Part 2, some aspects of Part 1 Impact on Provincial Law and these must be covered as well.

Timetable

Part 1

It is intended that Part 1 be proclaimed as soon as possible after passage of the legislation. Federal/provincial consultation on impact of certain Part 1 provisions should have been completed by that time.

Part 2

Part 2 is more complicated. If agreement with the provinces has not been reached through the consultated process, then premature proclamation of Part 2 could cause problems. Both consumers and businesses would be faced with general uncertainty in the area.

The federal/provincial consultations will focus not so much on the content of BDPA Regulations but rather on the best possible set of regulations which can be justified under federal or provincial law.

These will be, presumably, by the federal government as the basis for the BDPA Regulations and by the provincial governments as the basis for provincial legislation in the area.

The eventual proclamation of Part 2 of BDPA will be greatly affected by two factors:

1) the success of the federal/provincial consultations;

2) the legislative time tables of the provinces.

Even after an agreement has been reached in the technical consultations, the provinces will need time to enact new legislation or amend existing legislation.

Eventually, of course, a cut-off date will arise. If the consultations are stalled for some reasons, and no progress has been made for some time, then the federal government will have to take the necessary steps to ensure that the legislation is eventually put in place.

Flexibility

Flexibility is the key in this process. It is quite possible that a particular province may be willing and capable of meeting the new national standards in most provisions but not all. Part 2 of the BDPA would not be proclaimed in the province in its entirety in such a situation. When those provisions or an agreement have been reached the Act has been designed so that the sections need of the BDPA need not be applied.

However, where an agreement has not been reached and the differences are considered to be of major consequence, the federal government will proclaim the particular BDPA provisions generally in the provinces.

What is "substantially similar"?

One very good question is, "what does 'substantially similar' mean?" This is the test which has been proposed by the federal government in determining on whether or not to fully implement Part 2. Yet, the term is vague and doesn't convey a great deal of information.

It is purposefully vague. Whether or not the two levels of government can be said to be in agreement on a particular point is something which will have to be assessed during the course of the consultations. There are no pre set criteria in this exercise.

The Federal government is <u>not</u> looking for uniformity.

Some provisions aren't as important as others and greater flexibility is obviously proper in these instances. Some variations in coverage should be accepted.

In the end, a very important motivating factor will be the sense of responsibility which each government bears for its own constituent. Provinces which aren't willing to bring legislation up to the level which has been established jointly in other provinces will be short-changing their own consumers.

It is important to restate one point. There need not be duplication nor overlap of federal and provincial legislation in the consumer credit field if this implementation program is successful. Provinces will be able to attain their own legislative authority and improve the level of protection which they offer to residents in the province.

Their position in this regard will be unchallenged by federal legislation. Their ability to take these steps and to make such significant gains will be aided by the application of similar standards to federal institutions through the BDPA.

Administration

The administrative plans for BDPA recognize two basic facts:

1) there are existing operations in the federal government that are better equipped then CCA to regulate the activities of banks and other federally chartered institutions; and

2) the provinces are generally better able to see that consumer credit legislation is applied on a local basis for the protection of consumers.

If, as is hoped, BDPA Part 2 will be proclaimed in relatively few provinces (except in respect of banks) the presence of CCA will be small.

There are some provinces, however, that might wish to have BDPA totally apply in ther jurisdiction. The enforcement package which is being offered with BDPA would give any consumer department powerful tools to protect the interests of consumers in this area. The powers are borrowed primarily from trade practices legislation and several provinces do not have the benefits of these at the present time.

In this type of situation, the Federal Minister will be empowered to delegate authority to his provincial counterparts. The details of the arrangements would be established in the federal/provincial agreement. The provincial Minister and his department would have day to day authority regarding the administration and enforcement of the Act except, of course, in respect federally chartered institutions.

CCA would operate primarily, in such circumstances, in an advisory and coordinating role. It could monitor developments in the field, assess the impact of the legislation and the success of enforcement, assist with such technical backup services and information as may be required, and provide the research foundation for specific areas which will allow all jursidictions, whether they are operating under BDPA or under their own legislation, to deal intelligently with new developments in the consumer credit area.

Delegation to Other Federal Government Authorities

The Act requires that the Minister delegate authority in respect of banks to the Inspector General of Banks, and in respect of loan companies, federal trust companies, and insurance companies to the federal Superintendent of Insurance.

The provinces have expressed concern on several occasions regarding the ability of the office of the Inspector General of Banks to properly apply the legislation to the benefit of consumers who deal with the federal banks. The argument proceeds from the presumption by the provinces that the Inspector General is not equipped to deal with consumer-related problems and is too close to the interests of the banking community.

These concerns have been expressed on several occasions and are known both to the Department of Consumer and Corporate Affairs and to the Department of Finance. The Department of Finance fully supports the provisions of BDPA which will allow the Minister to ensure that a person exercising delegated authority (whether federal or provincial) performs his obligations competently. The federal Minister reserves the ability to revoke the delegation. Such a move would be obviously embarrassing since it would clearly indicate a perception that the delegatee has not acted in the best interests of consumers.

The Inspector General of Banks, Superintendent of Insurance and the Department of Finance proper is in full support of these provisions and CCA is confident that experience will demonstrate that the consumer interest will be better protected by having the legislation administered by people who have the greater expertise in dealing with particular types of institutions.

# Regulation Narrative

## Rate Calculation Method For Credit Charges On Loans

In accordance with the principles followed in developing the Borrowers and Depositors Protection legislation, it is necessary to establish a single, uniform method of calculating credit charge rates in all lending transactions (as well as rates of earnings on deposits). This standardization will contribute to reducing the complexity of the credit field and should enhance the borrowers understanding and ability to make accurate and straightforward comparisons between the charges imposed by competing lenders. Furthermore, the use of the same method for the calculation of earnings on deposits will allow the consumers to more realistically assess the spread between rates offered on deposits and rates charged on loans.

Currently, most lenders calculate on the basis of nominal rates where the rate for a period shorter than a year is simply an arithmetic fraction of the annual rate (e.g. 12% annual is equal to 1% monthly). However, the variety of compounding frequencies used by lenders result in an imperfect comparability of rates on the market. Also there is a systematic bias towards reducing the rate differentials between loans and deposits as rates on loans are always slightly underestimated and rates on deposits are generally overestimated by the use of such devices as the minimum balance basis. This situation is easily verifiable by computing the true actuarial value of most loan and deposit rates currently quoted on the market.

### Proposed regulation

The proposed regulation will provide that for all lending transactions, credit charges be computed on an "interest bearing" basis where a credit charge can only be levied for exactly the number of days the borrower had the use of the funds lent. In addition, the credit charge rate disclosed to the borrower and used in the calculation will be the effective annual rate.

The effective annual rate is the annual rate that results from the compounding of the periodic factor used in calculating the credit charge for sub-annual periods. For example, when credit charges are calculated and charged monthly, lenders use a monthly interest factor, say one percent. The corresponding effective annual rate is the one generated by compounding twelve times this monthly factor. The corresponding nominal annual rate would be in this case simply twelve times the monthly factor.

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Calculation method

In order to facilitate calculations based on effective annual rates, we will allow for the following simplifying assumptions.

- A year could be defined as having 365 days with the extra day in a leap year being disregarded as to its effect on the rate calculated and disclosed (but not for the credit charge calculation).

- A month could be defined as being 1/12 of a year regardless of its length so that lenders could operate with one standard monthly factor for a given effective annual rate. Following this same logic, a day within any month could be treated as 12/365 of the month so that a single standard daily factor also exists for a given effective annual rate.

- the same logic will apply for other sub-annual frequencies such as weekly, bi-weekly, bi-monthly, quarterly, semi-annual etc.

- Finally, regardless of the compounding frequency selected (which has to reflect the frequency of payment), any sub-period could be treated as a simple fraction of the periodic factor corresponding to this frequency while any longer period must reflect a compounding of the periodic factor.

The key requirement is that the periodic factor used in calculating the credit charges on the balance outstanding has to compound on the basis of the frequency of computation (payment). The same principle will apply for calculation of earings on deposits. If a lending transaction provides for monthly payments, the "interest-bearing" method requires that the credit charge be calculated for a monthly period while the effective annual rate concept implies that the monthly interest factor be compounded month after month.

The formulas used to calculate effective annual rates are relatively simple. For example, if monthly payments are stipulated and interest is computed monthly, the monthly rate (in decimals) would be defined as:

$$Rm = (1 + Ra)^{1/12} - 1$$

Where $Ra$ is the effective annual rate (decimal) which would be defined

...

conversely as: $Ra = (1 + Rm)^{12} - 1$. The daily rate within a month would be defined as: $Rd = Rm. 12/365$.

If the basis selected was quarterly, the quarterly rate would be defined as $Rq = (1 + Ra)^{1/4} - 1$ or, conversely the effective annual rate corresponding to a given quarterly rate would be: $Ra = (1 + Rq)^4 - 1$. The daily rate in this case would be: $Rd = Rq. 4/36$

The same logic applies to other subdivisions of a year. It can be expected however that the most frequently used basis will be monthly and daily. The monthly basis lends itself to transactions involving a set of fixed monthly payments or instalments and is appropriate for periodic manual calculations. The daily basis would lend itself to calculation of credit charges in variable credit arrangements or demand loans and to computerized operations.

Factor tables

Tables yielding periodic rates corresponding to given effective annual rates have been prepared on the basis of the formulas just described and will be part of the regulations. For illustration, sample tables are provided in Appendix no. 1. These tables give the monthly rates corresponding to effective annual rates ranging from 1/8 of 1% to 51% in 1/8 of 1% increments. Appendix no. 2 contains a sample of tables which give the total credit charge and the monthly payments per $1,000 corresponding to a given effective annual rate for selected amortization periods.

Calculation of credit charges

Whichever appropriate basis of compounding is employed, the borrower must only be charged interest for the number of days during which he had the use of the funds. The "interest-bearing" concept provides for this and the rate computed after termination of the lending transaction, based on the actual payment flow, must be the rate disclosed at the outset within a tolerence of plus or minus 1/8 of 1%.

With regard to variable credit arrangements, the "interest bearing" principle will mean that the lender may levy a credit charge from the date funds are advanced, defined as the date on which the lender makes payment to the vendor (e.g. in a three-party credit plan), or the date of purchase when the lender is the vendor (e.g. department stores credit plans) or that he may grant a grace period.

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Whatever the practice, however, the lender will have to clearly specify it and credit charges can only be levied for the period during which the borrower had the use of the funds after the specified due date. For example, if the lender specifies a grace period of 14 days after the billing date and that credit charges are imposed after the due date, then credit charges could only run for the number of days elapsed between the due date and the actual date of payment by the borrower. If the borrower pays 7 days after the due date, the lender can only charge the borrowers for 7 days interest based on the daily rate corresponding to the rate calculation system employed by the lender. In other words, lenders will no longer be allowed to charge a flat monthly rate on payments made after the due date, as is the predominant practice at the present time.

## Appendix No. 1

## Monthly Credit Charge Rates

This table gives the equivalent monthly factors for effective annual rates ranging from 1/8 of 1% to 51% by 1/8 of 1% increments.

CONSUMER AND CORPORATE AFFAIRS
MONTHLY INTEREST FACTORS
EFFECTIVE ANNUAL RATES

| RATE | FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.125 | .0001041079 | 4.125 | .0033741726 | 8.125 | .0065310490 | 12.125 | .0095826334 | 16.125 | .0125360095 | 20.125 | .0153975630 |
| 4.250 | .0002080950 | 4.250 | .0034744950 | 8.250 | .0066279668 | 12.250 | .0096763780 | 16.250 | .0126267914 | 20.250 | .0154855714 |
| 4.375 | .0003119642 | 4.375 | .0035747072 | 8.375 | .0067247012 | 12.375 | .0097700270 | 16.375 | .0127174839 | 20.375 | .0155734961 |
| 4.500 | .0004157144 | 4.500 | .0036748094 | 8.500 | .0068214934 | 12.500 | .0098635806 | 16.500 | .0128080871 | 20.500 | .0156613378 |
| 4.625 | .0005193473 | 4.625 | .0037748019 | 8.625 | .0069181034 | 12.625 | .0099570389 | 16.625 | .0128986012 | 20.625 | .0157490965 |
| 4.750 | .0006228613 | 4.750 | .0038746850 | 8.750 | .0070146116 | 12.750 | .0100504021 | 16.750 | .0129890265 | 20.750 | .0158367697 |
| 4.875 | .0007262574 | 4.875 | .0039744589 | 8.875 | .0071110182 | 12.875 | .0101436706 | 16.875 | .0130793631 | 20.875 | .0159243547 |
| 5.000 | .0008295361 | 5.000 | .0040741238 | 9.000 | .0072073233 | 13.000 | .0102368444 | 17.000 | .0131696111 | 21.000 | .0160118670 |
| 5.125 | .0009327005 | 5.125 | .0041736800 | 9.125 | .0073035273 | 13.125 | .0103299237 | 17.125 | .0132597708 | 21.125 | .0160992930 |
| 5.250 | .0010357468 | 5.250 | .0042731278 | 9.250 | .0073996303 | 13.250 | .0104229089 | 17.250 | .0133498424 | 21.250 | .0161866355 |
| 5.375 | .0011386755 | 5.375 | .0043724673 | 9.375 | .0074956325 | 13.375 | .0105158000 | 17.375 | .0134398260 | 21.375 | .0162738975 |
| 5.500 | .0012414867 | 5.500 | .0044716989 | 9.500 | .0075915343 | 13.500 | .0106085972 | 17.500 | .0135297217 | 21.500 | .0163610732 |
| 5.625 | .0013441804 | 5.625 | .0045708220 | 9.625 | .0076873357 | 13.625 | .0107013009 | 17.625 | .0136195299 | 21.625 | .0164481638 |
| 5.750 | .0014467568 | 5.750 | .0046698392 | 9.750 | .0077830371 | 13.750 | .0107939111 | 17.750 | .0137092506 | 21.750 | .0165351823 |
| 5.875 | .0015492158 | 5.875 | .0047687404 | 9.875 | .0078786386 | 13.875 | .0108864280 | 17.875 | .0137988840 | 21.875 | .0166221130 |
| 6.000 | .0016515581 | 6.000 | .0048675506 | 10.000 | .0079741404 | 14.000 | .0109788520 | 18.000 | .0138884303 | 22.000 | .0167089639 |
| 6.125 | .0017538018 | 6.125 | .0049662460 | 10.125 | .0080695428 | 14.125 | .0110711830 | 18.125 | .0139778898 | 22.125 | .0167957323 |
| 6.250 | .0018559377 | 6.250 | .0050648349 | 10.250 | .0081648461 | 14.250 | .0111634214 | 18.250 | .0140672625 | 22.250 | .0168824134 |
| 6.375 | .0019579660 | 6.375 | .0051633176 | 10.375 | .0082600503 | 14.375 | .0112555674 | 18.375 | .0141565486 | 22.375 | .0169690052 |
| 6.500 | .0020598867 | 6.500 | .0052616943 | 10.500 | .0083551597 | 14.500 | .0113476210 | 18.500 | .0142457484 | 22.500 | .0170555100 |
| 6.625 | .0021616814 | 6.625 | .0053599651 | 10.625 | .0084501625 | 14.625 | .0114395826 | 18.625 | .0143348613 | 22.625 | .0171419319 |
| 6.750 | .0022633774 | 6.750 | .0054581305 | 10.750 | .0085450710 | 14.750 | .0115314524 | 18.750 | .0144238896 | 22.750 | .0172282670 |
| 6.875 | .0023648631 | 6.875 | .0055561905 | 10.875 | .0086398814 | 14.875 | .0116232304 | 18.875 | .0145128311 | 22.875 | .0173145196 |
| 7.000 | .0024662269 | 7.000 | .0056541454 | 11.000 | .0087345930 | 15.000 | .0117149169 | 19.000 | .0146016871 | 23.000 | .0174006916 |
| 7.125 | .0025675959 | 7.125 | .0057519955 | 11.125 | .0088292085 | 15.125 | .0118065121 | 19.125 | .0146904575 | 23.125 | .0174869637 |
| 7.250 | .0026688084 | 7.250 | .0058497410 | 11.250 | .0089237257 | 15.250 | .0118980162 | 19.250 | .0147791426 | 23.250 | .0175730054 |
| 7.375 | .0027699092 | 7.375 | .0059473821 | 11.375 | .0090181456 | 15.375 | .0119894234 | 19.375 | .0148677425 | 23.375 | .0176589673 |
| 7.500 | .0028708984 | 7.500 | .0060449190 | 11.500 | .0091124684 | 15.500 | .0120807518 | 19.500 | .0149562574 | 23.500 | .0177448493 |
| 7.625 | .0029717769 | 7.625 | .0061423521 | 11.625 | .0092066944 | 15.625 | .0121719837 | 19.625 | .0150446875 | 23.625 | .0178306517 |
| 7.750 | .0030725437 | 7.750 | .0062396815 | 11.750 | .0093008236 | 15.750 | .0122631252 | 19.750 | .0151330330 | 23.750 | .0179163746 |
| 7.875 | .0031731992 | 7.875 | .0063369074 | 11.875 | .0093948564 | 15.875 | .0123541766 | 19.875 | .0152212939 | 23.875 | .0180020181 |
| 8.000 | .0032737391 | 8.000 | .0064340301 | 12.000 | .0094887929 | 16.000 | .0124451379 | 20.000 | .0153095705 | 24.000 | .0180875825 |

FACTOR IS THE MONTHLY DECIMAL RATE EQUIVALENT TO THE EFFECTIVE COMPOUNDED ANNUAL RATE.

# MONTHLY INTEREST FACTORS
## EFFECTIVE ANNUAL RATES

| FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR |
|---|---|---|---|---|---|---|---|---|---|---|
| .0181730675 | 29.625 | .0211991602 | 33.125 | .0241297175 | 37.625 | .0269708368 | 42.125 | .0297280420 | 46.625 | .0324063540 |
| .0182584743 | 29.750 | .0212810250 | 33.250 | .0242098184 | 37.750 | .0270485347 | 42.250 | .0298034827 | 46.750 | .0324796705 |
| .0183439020 | 29.875 | .0213644162 | 33.375 | .0242898504 | 37.875 | .0271261679 | 42.375 | .0298788627 | 46.875 | .0325529298 |
| .0184296513 | 29.000 | .0214469340 | 33.500 | .0243696137 | 38.000 | .0272037366 | 42.500 | .0299541821 | 47.000 | .0326261319 |
| .0185142217 | 29.125 | .0215297786 | 33.625 | .0244497084 | 38.125 | .0272812409 | 42.625 | .0300294409 | 47.125 | .0326992770 |
| .0185993144 | 29.250 | .0216117500 | 33.750 | .0245295347 | 38.250 | .0273586810 | 42.750 | .0301046392 | 47.250 | .0327723652 |
| .0186843287 | 29.375 | .0216940485 | 33.875 | .0246092925 | 38.375 | .0274360569 | 42.875 | .0301797772 | 47.375 | .0328453965 |
| .0187692651 | 29.500 | .0217762741 | 34.000 | .0246889822 | 38.500 | .0275133686 | 43.000 | .0302548550 | 47.500 | .0329183711 |
| .0188541237 | 29.625 | .0218584270 | 34.125 | .0247686037 | 38.625 | .0275906167 | 43.125 | .0303298727 | 47.625 | .0329912890 |
| .0189389046 | 29.750 | .0219405073 | 34.250 | .0248481572 | 38.750 | .0276678009 | 43.250 | .0304048303 | 47.750 | .0330641503 |
| .0190236079 | 29.875 | .0220225151 | 34.375 | .0249276430 | 38.875 | .0277449213 | 43.375 | .0304797280 | 47.875 | .0331369551 |
| .0191082339 | 30.000 | .0221044506 | 34.500 | .0250070607 | 39.000 | .0278219780 | 43.500 | .0305545658 | 48.000 | .0332097036 |
| .0191927826 | 30.125 | .0221863139 | 34.625 | .0250864110 | 39.125 | .0278989713 | 43.625 | .0306293439 | 48.125 | .0332823957 |
| .0192772543 | 30.250 | .0222681052 | 34.750 | .0251656938 | 39.250 | .0279759013 | 43.750 | .0307040624 | 48.250 | .0333550317 |
| .0193616490 | 30.375 | .0223498245 | 34.875 | .0252449091 | 39.375 | .0280527679 | 43.875 | .0307787214 | 48.375 | .0334276115 |
| .0194459670 | 30.500 | .0224314721 | 35.000 | .0253240572 | 39.500 | .0281295714 | 44.000 | .0308533209 | 48.500 | .0335001353 |
| .0195302083 | 30.625 | .0225130480 | 35.125 | .0254031382 | 39.625 | .0282063118 | 44.125 | .0309278611 | 48.625 | .0335726031 |
| .0196143731 | 30.750 | .0225945524 | 35.250 | .0254821521 | 39.750 | .0282829892 | 44.250 | .0310023420 | 48.750 | .0336450151 |
| .0196984615 | 30.875 | .0226759853 | 35.375 | .0255610991 | 39.875 | .0283596038 | 44.375 | .0310767638 | 48.875 | .0337173714 |
| .0197824737 | 31.000 | .0227573471 | 35.500 | .0256399794 | 40.000 | .0284361557 | 44.500 | .0311511266 | 49.000 | .0337896719 |
| .0198664097 | 31.125 | .0228386376 | 35.625 | .0257187929 | 40.125 | .0285126450 | 44.625 | .0312254304 | 49.125 | .0338619169 |
| .0199502702 | 31.250 | .0229198572 | 35.750 | .0257975399 | 40.250 | .0285890717 | 44.750 | .0312996753 | 49.250 | .0339341064 |
| .0200340547 | 31.375 | .0230010059 | 35.875 | .0258762204 | 40.375 | .0286654360 | 44.875 | .0313738616 | 49.375 | .0340062405 |
| .0201177633 | 31.500 | .0230820839 | 36.000 | .0259548347 | 40.500 | .0287417380 | 45.000 | .0314479891 | 49.500 | .0340783193 |
| .0202013960 | 31.625 | .0231630912 | 36.125 | .0260333827 | 40.625 | .0288179778 | 45.125 | .0315220581 | 49.625 | .0341503429 |
| .0202849530 | 31.750 | .0232440281 | 36.250 | .0261118646 | 40.750 | .0288941555 | 45.250 | .0315960687 | 49.750 | .0342223113 |
| .0203684343 | 31.875 | .0233248945 | 36.375 | .0261902806 | 40.875 | .0289702713 | 45.375 | .0316700209 | 49.875 | .0342942247 |
| .0204518401 | 32.000 | .0234056908 | 36.500 | .0262686306 | 41.000 | .0290463251 | 45.500 | .0317439148 | 50.000 | .0343660831 |
| .0205351703 | 32.125 | .0234864169 | 36.625 | .0263469150 | 41.125 | .0291223171 | 45.625 | .0318177506 | 50.125 | .0344378867 |
| .0206184250 | 32.250 | .0235670731 | 36.750 | .0264251337 | 41.250 | .0291982475 | 45.750 | .0318915283 | 50.250 | .0345096355 |
| .0207016042 | 32.375 | .0236476594 | 36.875 | .0265032869 | 41.375 | .0292741163 | 45.875 | .0319652480 | 50.375 | .0345813295 |
| .0207847079 | 32.500 | .0237281760 | 37.000 | .0265813747 | 41.500 | .0293499237 | 46.000 | .0320389098 | 50.500 | .0346529690 |
| .0208677363 | 32.625 | .0238086230 | 37.125 | .0266593973 | 41.625 | .0294256697 | 46.125 | .0321125138 | 50.625 | .0347245540 |
| .0209507893 | 32.750 | .0238890006 | 37.250 | .0267373546 | 41.750 | .0295013544 | 46.250 | .0321860602 | 50.750 | .0347960845 |
| .0210337669 | 32.875 | .0239693087 | 37.375 | .0268152469 | 41.875 | .0295769779 | 46.375 | .0322595489 | 50.875 | .0348675606 |
| .0211166691 | 33.000 | .0240495477 | 37.500 | .0268930743 | 42.000 | .0296525405 | 46.500 | .0323329802 | 51.000 | .0349389825 |

FACTOR IS THE MONTHLY DECIMAL RATE EQUIVALENT TO THE EFFECTIVE COMPOUNDED ANNUAL RATE.

## Appendix No. 2

### Equal Monthly Payments and Total Credit Charges per $1,000

This table gives the equal monthly payments and total credit charges per $1,000 for an effective annual rate ranging from 1/8 of 1% to 51% in 1/8 of 1% increments and for terms ranging from 1 to 60 months at monthly intervals and 6 to 50 years, at yearly intervals.

CONSUMER AND CORPORATE LOANS

EQUAL MONTHLY PAYMENTS - PER $1000 TOTAL INTEREST CHARGE

| INTEREST RATE | 30 YEARS TOTAL INTEREST CHARGE | 30 YEARS EQUAL MONTHLY PAYMENTS | 31 YEARS TOTAL INTEREST CHARGE | 31 YEARS EQUAL MONTHLY PAYMENTS | 32 YEARS TOTAL INTEREST CHARGE | 32 YEARS EQUAL MONTHLY PAYMENTS | 33 YEARS TOTAL INTEREST CHARGE | 33 YEARS EQUAL MONTHLY PAYMENTS | 34 YEARS TOTAL INTEREST CHARGE | 34 YEARS EQUAL MONTHLY PAYMENTS | 35 YEARS TOTAL INTEREST CHARGE | 35 YEARS EQUAL MONTHLY PAYMENTS | INTEREST RATE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8.1250 | 1642.80 | 7.23 | 1667.24 | 7.17 | 1734.08 | 7.12 | 1799.72 | 7.07 | 1868.24 | 7.03 | 1935.80 | 6.99 | 8.1250 |
| 8.2500 | 1681.80 | 7.31 | 1697.20 | 7.25 | 1764.80 | 7.20 | 1835.36 | 7.16 | 1900.58 | 7.11 | 1969.40 | 7.07 | 8.2500 |
| 8.3750 | 1681.20 | 7.39 | 1736.48 | 7.34 | 1795.52 | 7.28 | 1867.04 | 7.24 | 1937.60 | 7.20 | 2007.20 | 7.16 | 8.3750 |
| 8.5000 | 1685.20 | 7.47 | 1760.24 | 7.42 | 1830.08 | 7.37 | 1895.72 | 7.32 | 1970.24 | 7.28 | 2040.80 | 7.24 | 8.5000 |
| 8.6250 | 1716.80 | 7.55 | 1790.04 | 7.50 | 1860.80 | 7.45 | 1934.36 | 7.41 | 2002.80 | 7.36 | 2078.60 | 7.33 | 8.6250 |
| 8.7500 | 1750.40 | 7.64 | 1819.76 | 7.58 | 1891.52 | 7.53 | 1966.04 | 7.49 | 2039.60 | 7.45 | 2112.20 | 7.41 | 8.7500 |
| 8.8750 | 1779.20 | 7.72 | 1849.52 | 7.66 | 1920.38 | 7.62 | 1997.72 | 7.57 | 2072.24 | 7.53 | 2150.00 | 7.50 | 8.8750 |
| 9.0000 | 1808.00 | 7.80 | 1883.00 | 7.75 | 1956.80 | 7.70 | 2033.36 | 7.66 | 2108.96 | 7.62 | 2183.60 | 7.58 | 9.0000 |
| 9.1250 | 1836.80 | 7.88 | 1912.76 | 7.83 | 1987.52 | 7.78 | 2065.04 | 7.74 | 2141.60 | 7.70 | 2221.40 | 7.67 | 9.1250 |
| 9.2500 | 1866.40 | 7.96 | 1942.52 | 7.91 | 2022.08 | 7.87 | 2100.68 | 7.83 | 2176.32 | 7.79 | 2259.00 | 7.75 | 9.2500 |
| 9.3750 | 1894.80 | 8.05 | 1976.80 | 8.00 | 2052.80 | 7.95 | 2132.36 | 7.91 | 2210.96 | 7.87 | 2292.80 | 7.84 | 9.3750 |
| 9.5000 | 1926.80 | 8.13 | 2005.76 | 8.08 | 2087.36 | 8.04 | 2168.80 | 8.00 | 2247.68 | 7.95 | 2330.60 | 7.93 | 9.5000 |
| 9.6250 | 1955.20 | 8.21 | 2035.52 | 8.16 | 2116.86 | 8.12 | 2199.68 | 8.08 | 2234.40 | 8.05 | 2364.20 | 8.01 | 9.6250 |
| 9.7500 | 1985.60 | 8.30 | 2069.00 | 8.25 | 2152.64 | 8.21 | 2235.32 | 8.17 | 2317.04 | 8.13 | 2402.00 | 8.10 | 9.7500 |
| 9.8750 | 2016.40 | 8.38 | 2098.76 | 8.33 | 2183.36 | 8.29 | 2267.80 | 8.25 | 2353.76 | 8.22 | 2439.60 | 8.19 | 9.8750 |
| 10.0000 | 2045.60 | 8.46 | 2132.24 | 8.42 | 2217.92 | 8.38 | 2302.64 | 8.34 | 2386.40 | 8.30 | 2473.40 | 8.27 | 10.0000 |
| 10.1250 | 2079.20 | 8.55 | 2162.00 | 8.50 | 2248.64 | 8.46 | 2334.32 | 8.42 | 2423.12 | 8.39 | 2511.20 | 8.36 | 10.1250 |
| 10.2500 | 2110.80 | 8.63 | 2195.48 | 8.59 | 2283.20 | 8.55 | 2369.96 | 8.51 | 2459.04 | 8.48 | 2549.00 | 8.45 | 10.2500 |
| 10.3750 | 2139.20 | 8.72 | 2225.24 | 8.67 | 2313.92 | 8.63 | 2405.60 | 8.60 | 2492.48 | 8.56 | 2582.60 | 8.53 | 10.3750 |
| 10.5000 | 2171.00 | 8.80 | 2258.72 | 8.76 | 2348.48 | 8.72 | 2437.28 | 8.68 | 2529.20 | 8.65 | 2620.40 | 8.62 | 10.5000 |
| 10.6250 | 2196.80 | 8.88 | 2288.48 | 8.84 | 2379.20 | 8.80 | 2472.92 | 8.77 | 2565.92 | 8.74 | 2656.20 | 8.71 | 10.6250 |
| 10.7500 | 2229.20 | 8.97 | 2321.96 | 8.93 | 2413.76 | 8.89 | 2504.60 | 8.85 | 2598.56 | 8.82 | 2696.00 | 8.80 | 10.7500 |
| 10.8750 | 2258.40 | 9.05 | 2351.72 | 9.01 | 2444.48 | 8.97 | 2540.24 | 8.94 | 2635.20 | 8.91 | 2729.60 | 8.88 | 10.8750 |
| 11.0000 | 2291.40 | 9.14 | 2385.20 | 9.10 | 2479.04 | 9.06 | 2575.88 | 9.03 | 2672.00 | 9.00 | 2767.40 | 8.97 | 11.0000 |
| 11.1250 | 2314.80 | 9.22 | 2414.96 | 9.18 | 2513.60 | 9.15 | 2607.56 | 9.11 | 2708.72 | 9.09 | 2805.20 | 9.06 | 11.1250 |
| 11.2500 | 2351.60 | 9.31 | 2448.44 | 9.27 | 2544.32 | 9.23 | 2643.20 | 9.20 | 2741.36 | 9.17 | 2843.00 | 9.15 | 11.2500 |
| 11.3750 | 2385.40 | 9.39 | 2478.20 | 9.35 | 2578.08 | 9.32 | 2678.84 | 9.29 | 2778.08 | 9.26 | 2881.60 | 9.24 | 11.3750 |
| 11.5000 | 2412.80 | 9.48 | 2511.60 | 9.44 | 2613.44 | 9.41 | 2714.48 | 9.38 | 2814.80 | 9.35 | 2914.40 | 9.32 | 11.5000 |
| 11.6250 | 2441.60 | 9.56 | 2545.16 | 9.53 | 2644.16 | 9.49 | 2745.16 | 9.46 | 2851.52 | 9.44 | 2952.20 | 9.41 | 11.6250 |
| 11.7500 | 2474.00 | 9.65 | 2574.92 | 9.61 | 2676.72 | 9.58 | 2781.80 | 9.55 | 2884.16 | 9.52 | 2990.00 | 9.50 | 11.7500 |
| 11.8750 | 2504.40 | 9.74 | 2608.40 | 9.70 | 2713.28 | 9.67 | 2817.44 | 9.64 | 2920.88 | 9.61 | 3027.80 | 9.59 | 11.8750 |
| 12.0000 | 2535.20 | 9.82 | 2641.88 | 9.79 | 2744.00 | 9.75 | 2849.12 | 9.72 | 2957.60 | 9.70 | 3065.60 | 9.68 | 12.0000 |

ESE CALCULATIONS USE ANNUAL EFFECTIVE INTEREST RATES, ROUNDED-UP MONTHLY PAYMENTS
D A TOTAL INTEREST CHARGE EQUAL TO THE (PRINCIPAL SUM) MINUS (TERM TIMES PAYMENT).

CONSUMER AND CORPORATE LOANS

EQUAL MONTHLY PAYMENTS - PER $1000 TOTAL INTEREST CHARGE

| INTEREST RATE | 31 MONTHS TOTAL INTEREST CHARGE | 31 MONTHS EQUAL MONTHLY PAYMENTS | 32 MONTHS TOTAL INTEREST CHARGE | 32 MONTHS EQUAL MONTHLY PAYMENTS | 33 MONTHS TOTAL INTEREST CHARGE | 33 MONTHS EQUAL MONTHLY PAYMENTS | 34 MONTHS TOTAL INTEREST CHARGE | 34 MONTHS EQUAL MONTHLY PAYMENTS | 35 MONTHS TOTAL INTEREST CHARGE | 35 MONTHS EQUAL MONTHLY PAYMENTS | 36 MONTHS TOTAL INTEREST CHARGE | 36 MONTHS EQUAL MONTHLY PAYMENTS | INTEREST RATE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.1250 | 166.64 | 37.44 | 166.88 | 36.44 | 171.50 | 35.50 | 176.74 | 34.61 | 181.95 | 33.77 | 187.28 | 32.98 | 12.1250 |
| 12.2500 | 167.50 | 37.50 | 167.68 | 36.49 | 173.15 | 35.55 | 173.44 | 34.66 | 183.70 | 33.82 | 189.08 | 33.03 | 12.2500 |
| 12.3750 | 168.05 | 37.55 | 169.00 | 36.55 | 174.80 | 35.60 | 180.14 | 34.71 | 185.80 | 33.88 | 191.24 | 33.09 | 12.3750 |
| 12.5000 | 168.60 | 37.60 | 171.20 | 36.60 | 176.45 | 35.65 | 182.18 | 34.77 | 187.55 | 33.93 | 193.04 | 33.14 | 12.5000 |
| 12.6250 | 169.46 | 37.66 | 172.00 | 36.65 | 178.43 | 35.71 | 183.88 | 34.82 | 189.30 | 33.98 | 194.84 | 33.19 | 12.6250 |
| 12.7500 | 169.81 | 37.71 | 174.40 | 36.70 | 180.08 | 35.76 | 185.58 | 34.87 | 191.40 | 34.04 | 197.00 | 33.25 | 12.7500 |
| 12.8750 | 170.56 | 37.76 | 176.32 | 36.76 | 181.73 | 35.81 | 187.62 | 34.93 | 193.15 | 34.09 | 198.80 | 33.30 | 12.8750 |
| 13.0000 | 172.42 | 37.92 | 177.92 | 36.81 | 183.71 | 35.87 | 189.32 | 34.98 | 194.90 | 34.14 | 200.96 | 33.36 | 13.0000 |
| 13.1250 | 173.97 | 37.87 | 179.52 | 36.86 | 185.36 | 35.92 | 191.02 | 35.03 | 197.00 | 34.20 | 202.76 | 33.41 | 13.1250 |
| 13.2500 | 175.52 | 37.92 | 181.44 | 36.92 | 187.01 | 35.97 | 193.06 | 35.09 | 198.75 | 34.25 | 204.56 | 33.46 | 13.2500 |
| 13.3750 | 177.07 | 37.97 | 183.04 | 36.97 | 188.99 | 36.03 | 194.76 | 35.14 | 200.50 | 34.30 | 206.72 | 33.52 | 13.3750 |
| 13.5000 | 178.93 | 38.03 | 184.64 | 37.02 | 190.64 | 36.08 | 196.46 | 35.19 | 202.60 | 34.36 | 208.52 | 33.57 | 13.5000 |
| 13.6250 | 180.48 | 38.08 | 186.56 | 37.08 | 192.29 | 36.13 | 198.50 | 35.25 | 204.35 | 34.41 | 210.32 | 33.62 | 13.6250 |
| 13.7500 | 182.33 | 38.13 | 188.16 | 37.13 | 194.27 | 36.19 | 200.20 | 35.30 | 206.10 | 34.46 | 212.48 | 33.68 | 13.7500 |
| 13.8750 | 183.89 | 38.19 | 189.76 | 37.18 | 195.92 | 36.24 | 201.90 | 35.35 | 208.20 | 34.52 | 214.28 | 33.73 | 13.8750 |
| 14.0000 | 185.44 | 38.24 | 191.36 | 37.23 | 197.57 | 36.29 | 203.94 | 35.41 | 209.95 | 34.57 | 216.08 | 33.78 | 14.0000 |
| 14.1250 | 186.99 | 38.29 | 193.28 | 37.29 | 199.55 | 36.35 | 205.64 | 35.46 | 211.70 | 34.62 | 218.24 | 33.84 | 14.1250 |
| 14.2500 | 188.54 | 38.34 | 194.88 | 37.34 | 201.20 | 36.40 | 207.34 | 35.51 | 213.80 | 34.68 | 220.04 | 33.89 | 14.2500 |
| 14.3750 | 190.10 | 38.40 | 196.48 | 37.39 | 202.85 | 36.45 | 209.38 | 35.57 | 215.55 | 34.73 | 221.84 | 33.94 | 14.3750 |
| 14.5000 | 191.65 | 38.45 | 198.40 | 37.45 | 204.50 | 36.50 | 211.08 | 35.62 | 217.30 | 34.78 | 224.00 | 34.00 | 14.5000 |
| 14.6250 | 193.60 | 38.50 | 200.00 | 37.50 | 206.48 | 36.56 | 212.78 | 35.67 | 219.40 | 34.84 | 225.80 | 34.05 | 14.6250 |
| 14.7500 | 195.36 | 38.56 | 201.60 | 37.55 | 208.13 | 36.61 | 214.82 | 35.73 | 221.15 | 34.89 | 227.60 | 34.10 | 14.7500 |
| 14.8750 | 196.91 | 38.61 | 203.52 | 37.61 | 209.78 | 36.66 | 216.52 | 35.78 | 222.90 | 34.94 | 229.76 | 34.16 | 14.8750 |
| 15.0000 | 198.46 | 38.66 | 205.12 | 37.66 | 211.76 | 36.72 | 218.22 | 35.83 | 225.00 | 35.00 | 231.56 | 34.21 | 15.0000 |
| 15.1250 | 200.01 | 38.71 | 206.72 | 37.71 | 213.41 | 36.77 | 219.92 | 35.88 | 226.75 | 35.05 | 233.36 | 34.26 | 15.1250 |
| 15.2500 | 201.87 | 38.77 | 208.32 | 37.76 | 215.06 | 36.82 | 221.96 | 35.94 | 228.50 | 35.10 | 235.52 | 34.32 | 15.2500 |
| 15.3750 | 203.42 | 38.82 | 210.24 | 37.82 | 217.04 | 36.88 | 223.66 | 35.99 | 230.60 | 35.16 | 237.32 | 34.37 | 15.3750 |
| 15.5000 | 204.97 | 38.87 | 211.84 | 37.87 | 218.69 | 36.93 | 225.36 | 36.04 | 232.35 | 35.21 | 239.12 | 34.42 | 15.5000 |
| 15.6250 | 206.52 | 38.92 | 213.44 | 37.92 | 220.34 | 36.98 | 227.40 | 36.10 | 234.10 | 35.26 | 241.28 | 34.48 | 15.6250 |
| 15.7500 | 208.38 | 38.98 | 215.36 | 37.98 | 221.99 | 37.03 | 229.10 | 36.15 | 236.20 | 35.32 | 243.08 | 34.53 | 15.7500 |
| 15.8750 | 209.93 | 39.03 | 216.96 | 38.03 | 223.97 | 37.09 | 230.80 | 36.20 | 237.95 | 35.37 | 244.88 | 34.58 | 15.8750 |
| 16.0000 | 211.48 | 39.08 | 218.56 | 38.08 | 225.62 | 37.14 | 232.84 | 36.26 | 239.70 | 35.42 | 247.04 | 34.64 | 16.0000 |

HESE CALCULATIONS USE ANNUAL EFFECTIVE INTEREST RATES, ROUNDED-UP MONTHLY PAYMENTS
ND A TOTAL INTEREST CHARGE EQUAL TO THE (PRINCIPAL SUM) MINUS (TERM TIMES PAYMENT).

# The Criminal Rate in the Borrowers and Depositors Protection Act

Consumer Research Branch

Staff Study

John L. Evans

## The Criminal Rate in the Borrowers and Depositors Protection Act

The provision of a criminal rate, the lending above which would constitute an automatic criminal offence is central to the attack on loansharking in the proposed Act. The law enforcement people who were consulted during the preparation of the Bill made it very clear that in order to effectively deal with loansharks they required an easily proveable offence with substantial penalties. Their clear and unequivical recommendation was a maximum rate of interest. They indicated that so long as the rate specified fell below 100 percent per annum, it would meet their requirements. At the same time, our research indicated that such a maximum rate would necessarily have to be established high enough to preclude the possibility of interfering with the normal operations of the credit market if the stated objectives of the BDPA were to be achieved. The rationale behind this concern is presented in Evans (4). The result of the deliberations on this issue was the criminal rate ceiling of 45 percent. In the following discussion, the specific factors leading to this choice will be presented.

The basic premises underlying the BDPA are: 1) that individuals should have the right to make decisions regarding their need for, use of and ability to manage consumer credit, and that they should take primary responsibility for those decisions, and 2) that wherever possible, the market and competition should be allowed to allocate financial resources. Based on these premises, and the research evidence which has been accumulated, the optimal course of action for legislation to take was determined to be towards strengthening

market competition through improved education and information, strengthening of borrowers rights and remedies, reduction of unfair lenders remedies, and removal of restrictions on entry of new firms into the market. Such a course meant moving away from the direct regulation of interest rates.

With these factors in mind, the problem became the determination of how far below 100 percent to place the criminal rate without seriously interfering with the market process. This problem takes on significant proportions when one realizes that the area in which the market is currently most impeded is that for small loans for short periods to lower income and poorer risk individuals.

In order to induce entry of firms into this sector of the market, it is necessary to allow rates of interest which cover lenders fixed costs of lending plus offer a reasonable rate of return on invested capital. In order to accomplish this, the rate of interest must be quite high in the segment of the market of greatest concern; i.e., that for small sums for short periods.

These conclusions are substantiated by evidence available from the report of the U.S. National Commission on Consumer Finance (3), derived from studies conducted by Smith (6), Chapman and Shay (2), and Benston (1). These studies conclude that in order to cover lenders costs and provide a reasonable rate of return on equity (11 percent: this compares with a similar return to all manufacturing corporations in the U.S. in 1969 of 11.5 percent) the following rates would be required at the indicated loan sizes, and assuming that these loans were amortized in 12 equal payments over one year.

- Table 1 -

Finance Charges and Corresponding Annual Percentage Rates Necessary To Recover Total Estimates Costs*

| loan amount | Finance charge | % | loan amount | Finance charge | % |
|---|---|---|---|---|---|
| $100 | $56.06 | 91.36 | $1300 | $128.78 | 17.82 |
| 200 | 62.12 | 54.13 | 1400 | 134.84 | 17.32 |
| 300 | 68.18 | 39.62 | 1500 | 140.90 | 16.90 |
| 400 | 74.24 | 32.66 | 1600 | 146.96 | 16.54 |
| 500 | 80.30 | 28.43 | 1700 | 153.02 | 16.21 |
| 600 | 86.36 | 25.58 | 1800 | 159.08 | 15.93 |
| 700 | 92.42 | 23.53 | 1900 | 165.14 | 15.67 |
| 800 | 98.48 | 22.00 | 2000 | 171.20 | 15.45 |
| 900 | 104.54 | 20.80 | 2300 | 189.38 | 14.86 |
| 1000 | 110.60 | 19.82 | 2600 | 207.56 | 14.41 |
| 1100 | 116.66 | 19.04 | 3000 | 231.80 | 13.98 |
| 1200 | 122.72 | 18.37 | | | |

Source: (3), page 144.

Three qualifications should be noted with regard to these figures. First, these are minimum rates necessary to cover lender costs of servicing the market. Second, an 11 percent return is sufficient to maintain the existing level of competition. Allowable rates which would result in an expansion of competition would be higher. Third, the data from which these figures were generated is from 1964 in the case of the Chapman and Shay study (2), and 1968-70 in the case of the Benston study (1). With the general cost increases of recent years the minimum required rates may be higher than those given above. The overall effect of these considerations is to emphasize that the rates shown are indeed minimum required rates.

Some might criticize these data on the basis that they relate to U.S. and not Canadian firms. This would not appear to be a valid criticism since there are no data known to the author which indicates that the cost structure of Canadian lenders is significantly lower than that of their U.S. counterparts. In fact, there are many economists who would support a contrary position; that at least for banks, Canadian cost structures may be higher due to such factors as over branching and insufficient competition.

While cost data on Canadian lending operations are sparce, some have been provided in a submission of the Department of Provincial Secretary - Saskatchewan (7). These data indicate that the return on equity for sales finance companies and consumer loan companies in Canada in 1974 was approximately 11%. It should be noted that this is the figure assumed by the National Commission on Consumer Finance to be the required rate of return on equity.

Also in this submission are data from a Canadian Consumer Loan Association survey of 10 companies for the years 1960-73. From these data cost figures for Canadian firms were derived which were then compared to those in the National Commission on Consumer Finance report.

- Table 2 -

Comparison of U.S. and Canadian Consumer Loan Company Cost Structures (per $100 of outstanding credit)

| | U.S. | | CANADA | |
|---|---|---|---|---|
| | 1964 | 1969 | 1970 | 1973 |
| Lenders' Income | $21.40 | $18.40 | $20.22 | $20.64 |
| Operating Expenses: | 12.73 | 7.80 | 8.49 | 9.16 |
| Salaries | 5.60 | 3.64 | 3.66 | 3.60 |
| Occupancy* | .98 | 1.92 | 1.95 | 1.98 |
| Advertising | .71 | .42 | .31 | .34 |
| Provisions for losses | 2.27 | .99 | 1.78 | 1.66 |
| Other | 3.18 | .83 | .79 | 1.58 |
| Non-Operating Expenses: | 8.67 | 10.60 | 11.73 | 11.48 |
| Interest | 4.17 | 5.38 | 7.12 | 6.20 |
| Income taxes | 2.17 | 2.53 | 2.36 | 2.36 |
| Cost of equity funds | 2.33 | 2.69 | 2.25 | 2.92 |

* Includes for Canada: rents, furniture, fixtures, office operations, credit investigation, costs for collateral.

As can be seen, the costs of Canadian Consumer Loan Companies are somewhat below those for U.S. firms even when 1973 data for Canada are compared to 1964 data for the U.S. The key figure to note is "cost of equity funds" (= net profit per $100 of outstanding loans). These data tend to indicate that the minimum rates estimated in the U.S. studies probably represent a reasonable approximation for Canadian lenders at this time.

Given these results, the 45 percent criminal rate can be placed in clearer perspective. If it is important that borrowers have access to small loans (less than $200) for periods of a year or less, then quite high rates must be allowed. Some U.S. states have enacted ceiling far beyond 45 percent to accommodate such loans. For example, Robert Shay, in a memorandum found in (3; pg. 247) reports that there are special provisions

> "for loans ranging from $150 or less in South Carolina; loans of $100 or less in Mississippi, Oklahoma, and Texas; loans of $95 or less in North Carolina; $90 or less in Montana; $75 or less in Alabama; to $50 or less in Alaska; all such statutes allow rate ceilings ranging by size of loan from 61 percent to 240 percent."

Of course the very high figures represent rates for very small amounts, say $50; for periods of 6 months or less. For example, a loan of $50 to be repaid in 6 monthly installments of $15 (finance charge = $40) carries an annual percentage rate of 238 percent, yet it is unlikely that on a "one shot" basis* the revenue to the lender would even cover his costs.

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* If the lender could count on a long term relationship with the borrower where several loans would be made, the reduced expenditures in originating and administering future loans could justify making the one described.

Given these data and those from Table 1, it can be seen that even a rate of 45 percent will preclude a wide range of small, short-term loans from being made. Clearly, the effect of reducing the ceiling would have a drastic effect on small, short-term loans. From Table 1 we can see that a 40 percent ceiling, for example, would virtually eliminate small loans of less than $300. Even assuming an 18 month repayment period, loans under $185 would probably not be made given such a ceiling.

The preceding analysis indicates the logic behind the establishment of the criminal rate at the level of 45 percent. The rate has to be low enough so as to allow effective action against loansharks (below 100 percent), yet high enough so as not to preclude, within reasonable limits, small, short-term loans. As can be readily seen, 45 percent only accomplishes this latter objective in a partial fashion. If an objective of the Act is to provide a clear, easily proveable criminal offence which will act effectively against loansharks, and at the same time allow the type of flexibility in the market which is required to service low income and poorer risk borrowers, then the 45 percent rule must be defended. If the criminal rate is reduced, serious exclusionary effects will be experienced. As was shown in Table 1, a rate of 40 percent will preclude loans below $300, assuming a 12 month repayment period. Such effects are serious to lower income individuals since their only alternative sources of credit are unsavory vendor-creditors and loansharks, both of whose practices are most difficult and costly to police. In addition, it is well known that these "lenders" extract far more from their clients than 45 percent.

The trade-off is therefore clear. As the criminal rate is reduced, a growing class of borrowers is excluded from the legitimate credit market, borrowers who are already clearly disadvantaged in our society. Further, the evidence is quite clear that "illegal" sources of credit will be made available and that low-income and ill-informed borrowers will make use of these sources if no alternatives are available. A rate of 45 percent, while still having exclusionary effects, will allow legitimate lenders to operate in the small loan market down to a loan size of approximately $125 to $150 assuming an 18 month repayment period. At the same time, the rate will allow effective action against loansharks. All the evidence suggests that this is the optimal level for the criminal rate.

It should be noted that while 45 percent may appear high to some, the current ceiling under the Small Loans Act for loans of $300 or less (2 percent per month or 26.8 percent per year) represented a rate nearly 6 times the prime rate during the period in which the latest amendments to this act were being prepared. A similar analysis indicates that 45 percent bears the same relationship to the current $8\frac{3}{4}$ percent prime rate.

John L. Evans

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# The Unwarranted Rate in The Borrowers and Depositors Protection Act

Consumer Research Branch

Staff Study

John L. Evans

## The Unwarranted Rate in the BDPA

The Borrowers and Depositors Protection Act has been designed under the assumption that the borrowers ultimate protection is with the market, and that intervention should occur only where the market can be shown to be operating ineffectively. In cases where ineffective operation can be shown, intervention should first attempt to alter and/or create conditions which will lead to improvements in these operations. Only where such improvement oriented actions are unlikely to succeed should direct regulation take place.

We have determined that such a situation frequently exists in the servicing of lower income, poorer risk, poorly educated and/or ill-informed borrowers. Experience indicates that these groups are often taken advantage of by disreputable lenders and that protection is required. The crucial question is, what form should this protection take?

In a previous paper (4) it was shown that the direct regulation of the cost of credit through the imposition of interest rate ceilings is unworkable and imposes substantial costs on the very borrowers which such regulation purports to assist. Likewise, the licensing of lenders adds neither a significant nor an effective element to control to the regulatory process and is a costly form of intervention (see 5). In fact, one of the main reasons for the market's seeming inability to operate effectively in certain areas, and for the problems encountered by the borrowers mentioned above has been the very existence of these forms of regulation. To avoid perpetuating these problems, other forms of protection have been proposed for the

proposed Borrowes and Depositors Protection Act; liberalized prepayment provisions on loans and the Unwarranted rate system.

The right to prepay a non-mortgage loan at any time without penalty was included in the proposed Act to allow borrowers who find that they have been charged a rate greater than that available to them elsewhere in the market an easy and straight forward solution to their problem. They can simply obtain the preferred loan and prepay the higher cost loan at no additional cost. We believe that the existence of this provision will not only provide a direct benefit to borrowers who wish to prepay their loans but will also provide a significant deterrent to the charging of rates which are not in line with those available to borrowers elsewhere in the market. This is so since if a borrower prepays early, the lender loses the interest he could have received and also a portion of the fixed costs he incurred in establishing the loan in the first place. It is understood that there are costs associated with the provision of such a right which will most likely manifest themselves in the form of slightly higher interest rates. However, the overall market benefits plus the individual benefit of being able to easily undo a bad loan situation are judged to be worth this additional cost. In effect the increased cost is a form of insurance premium.

Liberalized prepayment provisions provide a solution for borrowers to whom alternative loan options are available within the normal range of lending. However, they do not provide assistance to borrowers whose loan options are highly restricted. To provide protection here, the unwarranted rate provision has been created. This provision allows the courts to review and revise lending transactions which involve rates of credit charge greater than those justified on the basis of the risk characteristics of the

particular borrower and the specific costs associated with the lenders operations. In any such review, the onus is on the lender to show that the rate in question is in fact warranted. In addition, any rate found to be above that deemed as the "criminal rate" (45%) will be automatically considered "unwarranted". This approach allows reputable lenders to make legitimate loans anywhere in the range below the criminal rate, and thus avoids the exclusionary effects of low interest rate ceilings. However, it deters fringe lenders from freely taking advantage of lower income, poorer risk, ill-informed and/or poorly educated borrowers by providing a process through which affected borrowers can obtain relief.

The basic concept of judicial review and revision of transactions is not new with this Act. It has been employed in all the provincial Unconscionable Transactions Relief Acts, the U.K. Consumer Credit Act (1974), the South Australian, New Zealand and German consumer protection legislation, to mention a few, and it has been proposed in both the U.S. Model Consumer Credit Act (see 9) and the U.S. Uniform Consumer Credit Code (see 8). What is relatively new, is that the Unwarranted Rate, following the U.K. Consumer Credit Act (1974), places the onus of proof as to whether or not a particular rate is warranted on the lender. Effectively, a borrower who feels he has been charged an unwarranted rate, given all circumstances, may apply to a court for a review of the credit charge rate and a determination. In such a case it would fall upon the lender to show that the rate charged was warranted. This is much more powerful protection than that found in the provincial UTRA's where the borrower must prove that a given transaction is unconscionable. Further, many unconscionability laws are otherwise less effective than the unwarranted rate. Under some such statutes, a borrower

could show that a rate was excessive but it may nevertheless be ruled not to be harsh and/or unconscionable. Under the Unwarranted Rate, the guidelines to the court are clear, the only important factor is whether or not the rate charged was unwarranted (excessive in view of market conditions at the time the transaction was entered into). The sole issue of importance here is the rate charged and not whether the borrower was coerced, etc. by the lender.

There has been a significant amount of comment leveled against the shifting of the onus of proof from the borrower to the lender. It has been noted that if the court cannot come to a determination that the rate charged by the lender is warranted beyond a reasonable doubt, then the court must find the rate to be unwarranted. Further, that the shifting of onus will give rise to frivolous actions by borrowers. We cannot sympathize with these criticisms. There is no evidence to suggest that the shifting of the onus of proof will cause borrowers to throw caution to the wind on the chance of obtaining a favourable judgment in the courts. There are very real disincentives to this type of behaviour in the form of court costs (the total of which could be levied against the losing party in a case), the costs of the borrowers time, psychological stress, etc.

With regard to the comment that lenders will be placed at a disadvantage by having to prove beyond a reasonable doubt that a rate is warranted, we agree. This is one of the main purposes for shifting the onus of proof; to place lenders in a position where they have to be much more careful in the rate setting process. It is clear that in the sector of the market where the unwarranted rate provision is most likely to be used, borrowers are the price takers and lenders are the price setters. This is due both to the

fact that the sources of funds open to borrowers of poorer risk and lower incomes are severely limited, as well as the fact that borrowers in this sector are the least able to make complex judgments on financial matters. As a result, such borrowers would have great difficulty in producing evidence proving that they have been harshly dealt with. This is well substantiated by the relative dearth of actions brought over the years under the provincial Unconscionable Transactions Relief Acts.

Lenders, however, cannot be considered to be in the same position with regard to knowledge and ability. We are convinced that those in the business of lending know full well the bases upon which rates are established, and are entirely capable of substantiating their rates when they are fair and equitable. Given the superior bargaining position of lenders as well as their command over the information upon which rate judgments will be based, we feel that the shifting of the onus of proof is not only equitable but also essential if the unwarranted rate system is to provide effective protection to borrowers.

It should be noted that consumer advocates have also presented criticisms of the Unwarranted Rate system. Some believe it to be ineffective. For example, The Consumers Association of Canada submits that,

> "Even though the burden of proving the reasonableness of rates would, as proposed, fall to lenders, the success of the unwarranted rate system depends ultimately upon the willingness of those most likely to need protection to go to court. Experience with the various provincial Unconscionable Transactions Relief Acts over a fifty year period has made it clear that these people will not contest high rates in court."*

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* Submission of The Consumers Association of Canada on the proposed Borrowers and Depositors Protection Act to the Honourable Anthony C. Abbott, Minister, dated 20th October, 1976, pp.2-3.

We believe that this is not a valid criticism for several reasons. First, the judicial rulings under the provincial Unconscionable Transactions Relief Acts have been less than effective in protecting consumers partly as a result of their broad conception and the consequent difficulty of the courts to come to grips with the precise meaning of the term "harsh and unconscionable". However, as Professor Ziegel (13) points out, the courts have been able to make much more positive statements concerning what constitutes an excessive interest rate. He states that in "the few reported Canadian cases (the courts) seem to leave very little margin between prevailing rates for a loan of a similar character and what is regarded as an excessive rate" (pgs. 66-67). Since the Unwarranted Rate requires only such a rate determination and avoids the issue of unconscionability, the courts should be better able to effectively apply the new law in the protection of borrowers.

Second, the proposed Act provides that Minister or his appointee be empowered to initiate or continue civil actions on behalf of borrowers who believe they have been charged an unwarranted rate. The Attorney General of Saskatchewan is currently so empowered under that province's Department of Consumer Affairs Act. The Minister will also provide such borrowers with guidance as to the reasonableness of their cases and thus reduce borrower reluctance to litigate as well as the incidence of frivolous litigation. Further, we expect that legal aid operations will actively take up the borrowers cause. This has happened in the United States. As Jordan and Warren (7) point out:

> "Information from legal aid, neighborhood legal service, and rural assistance attorneys indicates that when the private remedies of consumers are vigorously asserted by attorneys who have the resources to carry through on litigation, and the imagination to raise test cases, the impact on creditors can be great" (pgs. 427-28).

We also feel that much of the reluctance of borrowers to litigate has resulted from the relative ineffectiveness of the statutory safeguards. Such should not be the case with the Unwarranted Rate system.

We are convinced that the Unwarranted Rate system provides sound borrower protection. As the Crowther Commission in U.K. stated when rejecting fixed ceilings in favour of their unwarranted rate system, "these proposal appear to us to have the merit of giving reasonable protection to the borrower whilst at the same time allowing a measure of flexibility" (pg. 277). Such a comment was also made by Walter D. Malcolm with regard to the unconscionable transaction provision in the U.S. Uniform Consumer Credit Code. He stated that

> "the Code contains language with respect to unconscionable agreements and conduct. We have done so for the simple reason that we see no escape from this result if we are to have any provision flexible enough to adjust to the adroit maneuvers of fringe operators. And we think unconscionability is the appropriate concept to use" (pg. 948).

With regard to this same piece of model legislation, Jordan and Warren (7) state,

> "In the initial stages of the drafting of the Code, the desirability of giving the Administrator the power to sue to enjoin unconscionable conduct was hotly debated. Opposition to the proposal has subsided somewhat as more people working with the Code project have accepted this flexible power as the most effective way of dealing with the reprehensible creditor without imposing rigid limitations on the reputable ones as well." (pg. 426).

The most recent evidence relating to the unwarranted rate was obtained from Derek Hyde, the chief architect of the U.K. Consumer Credit Act (1974). He indicated that they were very happy with the system in the U.K. and that lenders had come to accept the system and were prepared to adjust their practices accordingly. No cases have yet reached the courts, however, the administrators have worked out a set of guidelines with the courts relating to the application of the system. Important to note is that lenders there have significantly tightened up their lending practices and are taking a more careful attitude towards lending. There has been, in other words, a substantial self-policing effect felt so far.

Given the available evidence, we feel that the unwarranted rate, if properly administered, will be an effective and flexible tool in the protection process. It will allow legitimate lenders to actively sevice the vast majority of borrowers and will minimize the exclusionary effects generally associated with attempts to regulate the cost of credit. It comes close to the ideal regulatory tool - one which affects only those who operate beyond the bounds of reason while allowing responsible operators to pursue their activities unhampered.

John L. Evans

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# Discussion Paper

## Calculation of Earnings on Deposits

It is necessary to provide rules for the calculation of deposit earnings in order to achieve one of the central objectives of the legislation: the standardization of basic concepts in lending and deposit transactions. This regulation will ultimately ensure that earnings calculations are on the basis of a single, uniform calculating method so that statements pertaining to a given rate for a given type of account are accurate and mean precisely the same thing for all institutions.

Adoption of a standard procedure will reduce the complexity of the savings field and enhance the depositor's ability to make accurate and straightforward comparisons between alternative savings instruments. Further, since the method is essentially similar to that proposed for calculating credit charges on lending transactions, it will facilitate clear comparisons between the yield on savings and the cost of debt so that unambiguous calculations can be made regarding decisions as to the most appropriate manner to pay for a purchase (e.g. reduce savings or incur debt).

The ultimate objective is to require that earnings be calculated on all deposit accounts using the daily balance method. This method will be described in more detail below. While the ultimate objective is complete standardization, our intention at the present time is to proceed with a preliminary set of rules which aim at this objective but leaves flexibility for institutions to effect the conversion gradually.

### Proposed regulation

The set of rules proposed for the calculation of earnings on deposits can be summarized as follows:

1. Deposit-taking institutions are free to offer or not to offer earnings on deposits and if they do so, there is no restriction whatsoever as to the level of the rate of earnings offered.

2. If earnings are offered, the rate disclosed and used in earnings calculations must reflect at least the effective annual rate. This concept is similar to that used for calculation of credit charges on loans. It is described in Appendix No. 2.

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3. For accounts stipulating that the depositor may have to give a prior notice for the withdrawal of his funds, earnings will have to be given, on the basis of the rate disclosed, for exactly the number of days an amount has remained on deposit. In other words, from the day of deposit to the day of withdrawal. For accounts where funds can be withdrawn without notice, no specific method of calculation is provided.

4. Deposit-taking institutions will have total flexibility as to the time and frequency of earnings calculation, so long as their method reflects the conditions set out in 2 and 3 above. However, they will have to credit the depositor's account or otherwise pay to him his earnings in the following fashion:

   - For fixed term deposits, at the end of the term. If the term exceeds one year, the rate disclosed will have to reflect an annual compounding.

   - For variable term deposits, such as savings accounts, crediting must be made at least once a year.

   - In all cases, a depositor must be credited with his earnings whenever he closes his account.

5. The Minister will retain the possibility to grant temporary exemptions to institutions operating on a manual accounting system where they may face serious problems in adapting to a calculation method based on the daily balance concept. This is in addition to a phasing-in period which will be provided in order for all institutions to make the conversion to the new system.

The Daily Balance Method

As pointed out earlier, this approach requires that earnings be paid on a deposit for exactly the number of days a sum has remained on deposit, with no restrictions as to a minimum number of days. This practices is predominant in the United States and is used also by a number of Canadian deposit-taking institutions. The method is also known as "day of deposit to day of withdrawal", "day-in, day-out," etc. Appendix no. 1 gives a preliminary overview of the extent to which this approach is used at the present time.

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In Canada, the predominant practice for calculation of interest on savings accounts (with no chequing privilege) is the minimum monthly balance where interest for a monthly period is paid on the lowest amount appearing in the account during the month. In this fashion, any amount standing above this minimum or any deposit for a period of less than a full month does not earn interest. For savings accounts with a chequing privilege, the common practice is to use the minimum semi-annual balance. As chequing accounts by their nature experience wide variations, institutions usually end up paying very low interest on these deposits.

The daily balance approach is a departure from this practices. In this case, if a borrower deposited a sum for, say 15 days, he would be entitled to earn interest for 15 days. It also means that interest is not lost for the entire period when an account shows a low balance for only a few days.

This sytem, however, does not imply that earnings have to be actually calculated every day, although such would not be prohibited. Procedures currently used in application of this approach range from actual calculation and crediting every day or whenever an entry is made to the account, as is offered by many U.S. institutions, to semi-annual calculation and crediting. What appears to be one of the simplest procedures, particularly for manual accounting systems, is to calculate interest on the basis of the average daily balance during the period. In this case, the calculations involved are very simple: a straight average of the daily balances during the period is established and then multiplied by the periodic rate corresponding to the effective annual rate disclosed. As crediting only has to be made once a year under our proposal, no massive calculation operations are necessary. Moreover, so long as an effective annual rate is specified and employed, there is no significant gains to achieve from the borrowers' point of view by more frequent calculation and crediting. This approach then seems to offer very good potential for keeping at a minimum the costs associated with the daily balance concept.

Feasibility of the Daily Balance Approach

The Department is currently conducting an investigation to that effect and has contacted already numerous institutions in Canada and elsewhere which have adopted this method for calculating earnings on deposits. Preliminary results indicate (see Appendix no.1) that for computerized operations, there is no significant difference

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in using a daily balance approach or a minimum balance one. There already exists a variety of computer software using daily balances as the basis for calculations. In order to leave as much flexibility as possible, it is intended to leave it to the option of the institution to select the daily balance most appropriate to their accounting system (e.g. mimimum daily balance, closing balance, opening, average, etc.).

It should also be noted that the only accounts which will really be affected are those that are for other than a fixed-term, since fixed term accounts now employ, in effect, the proposed daily balance system. As such, only true savings (non-chequable) and chequable savings are affected. In the case of non-chequable accounts, the number of transactions are relatively low (6 to 8 entries per year in the U.S.) indicating that no massive calculations will be involved. Chequable savings accounts are by nature more active and may involve more calculations. However, given the very small interest payments made on these accounts as a result of the miminum semi-annual balance, borrowers may be better served if institutions were to eliminate the interest feature and replace it by a number of free cheques per period.

For manually operated institutions, a problem may exist. It is interesting to note, however, that some small institutions with manual accounting systems, for instance credit unions in B.C., have been able to offer "daily balance" accounts without any significant problems. But in any case, it is our intention to alleviate, as much as possible, potential problems for these institutions and generally to seek ways which will facilitate conversion to the new rules for all deposit-taking institutions, including those already computerized. To this effect, the modified proposals as described earlier go a long way towards this end. The main accomodations can be summarized as follows:

1. Frequency of crediting has been reduced from monthly to annually,

2. Daily balance system will apply to "notice" deposits only,

3. A phasing-in period after proclamation of the legislation will be provided for all institutions,

4. Small and manually operated institutions could benefit from temporary exemption.

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In our judgment, the revised proposals meet most of the concerns expressed by various groups of deposit-taking institutions before the House Committee last year and in representations to the Department. The immediate effect of these modifications will be to reduce substantially the cost figures put forward by the Canadian Bankers Association. In that case, we expect that the revised proposals for the calculation of deposit interest should meet general acceptance.

# APPENDIX NO. 1

## Feasibility of Daily Balance Method

(Results from a preliminary investigation)

The objective of the study is to acquire information on the characteristics of those accounts in which interest is calculated on the daily balance and to provide information, if obtainable, about the feasibility from a cost/benefit perspective for a deposit-taking institution to convert to that method. This is an interim report and is based on limited information.

The U.S. Experience

The American Bankers Association has furnished some interesting data on the extent to which the daily balance method is in use by commercial banks. In an "Instalment Credit Survey" undertaken by the ABA in 1976 which was based on a representative nationwide sample of 3,735 banks, the results indicated that the dominant method of paying interest on savings accounts was the daily balance method. The most prominent time frame of compounding interest was daily, closely trailed by quarterly. The most prominent time frame of crediting interest was on a quarterly basis. While these results are interesting, it must be pointed out that the majority of the responding banks (two thirds) were in the highest size classification (i.e. deposits of $500 million and over).

The ABA has provided unit cost and other information for regular savings accounts. In the case of banks in the highest (over $500 million) aggregate deposit level classification, the average size of an account is $1,897, the average no. of interest postings is 4.4 per year, the average no. of deposits is 5.4 per account per year, and the average no. of withdrawals is 3.7 per account. Units costs of various transactions are as follows: 39¢ for a deposit, 76¢ for a withdrawal, $2.38 to open an account, $1.33 to close an account, $10.17 to maintain an account, and $1.56 to post the interest to an account. While 74% of the total number of accounts are less than $1,000 in size, they account for only 6% of the total volume of deposit dollars. These figures are averages for all types of savings accounts.

a) Bank of America

The Bank of America introduced daily interest calculation in 1961. At that time, interest was compounded quarterly and calculated manually using calendar tables and interest rate tables. The interest was computed daily, but only in the case of those accounts having activity for the day. Interest was posted to the account quarterly.

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The Bank of America had 800 branches in 1961 and approximately 2½ million savings accounts. There are now 1100 branches. All branches were automated in 1961 for chequing accounts but not for savings accounts. The bank was at that time reportedly in the process of introducing new computer programs and accounting procedures. In 1961, there was an average of six entries per year. There are now eight per year.

All savings accounts at the Bank of America are now automated. Interest is now compounded daily and posted quarterly.

b) Wells Fargo Bank

Wells Fargo Bank converted to the daily balance method in 1976. All 325 branches are fully computerized and Interest is now compounded daily and posted quarterly.

The Canadian Experience

In Canada, at least three trust companies offer daily balance savings accounts.

a) Guaranty Trust

All 48 branches of Guaranty Trust offer daily interest accounts in which interest is compounded and credited semi-annually. The minimum balance permitted is $3,000. Five free cheques per month are permitted on accounts having a minimum monthly balance of $20,000. Interest is earned at the rate of 5½% per annum. Guaranty Trust also offers savings accounts where interest is earned at the rate of 6% per annum. Interest on these accounts is calculated on the minimum monthly balance and posted to the account semi-annually. There are no account restrictions.

As mentioned earlier, Guaranty Trust has 48 branches. Although the eight branches in Toronto and the three in Ottawa are on computer, most of the others compute manually.

b) Metropolitan Trust

Metropolitan Trust, with 22 branches, also offers a daily interest savings account. Interest is compounded and credited semi-annually. The minimum balance permitted is $2,000. There are no other account restrictions. It was the first company in Canada to launch daily interest (1973). Twelve of its 22 branches are computerized. All twelve went "on line" this year, six of them in the last month.

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Interest on the daily interest savings account is paid at the rate of 6¼% as compared with a lower rate of 6% paid on its savings account in which interest is calculated on the minimum monthly balance. Note that the nominal rate is higher on the daily interest savings account.

c) Canada Trust

Canada Trust introduced a daily interest savings account on October 1 of this year. Canada Trust took over Lincoln Trust in 1976 and Ontario Trust in January 1977 and now has 131 branches of which 97 offer daily balance interest calculation. These 97 are all computerized. There are no account restrictions whatsoever. Interest on the daily interest savings account is paid at 5½% per annum compounded monthly. (The effective annual rate is 5.64%). Interest on the regular interest savings account is paid at 5 3/4% per annum calculated on the minimum monthly balance, compounded semi-annually. Interest on the daily interest savings account is posted monthly and on the regular interest savings account it is posted semi-annually.

d) Provincial Bank

None of the chartered banks with the exception of the Provincial Bank offers daily balance interest calculation. The Provincial Bank and the Unity Bank merged effective June 16. The Provincial Bank had approximately 400 branches and the Unity Bank had 18. Only these same 18 branches continue to offer daily balance interest calculation.

The "Unity Bank" branches of the Provincial offer two types of savings accounts: a "Capital Account" paying interest on the daily balance at 5 3/4% p.a. and a "Premium Savings Account" paying interest on the minimum monthly balance at the same rate. In both cases, interest is compounded and posted semi-annually.

Under the terms of the "Capital Account", a $500 minimum balance must be maintained during the period. Only one withdrawal per month is permitted. The minimum permissible deposit is $50.00. The account must be open for a minimum of 30 days for interest to be paid.

Most of the 18 branches offering the "Capital Account" are on computer. The former "Unity Bank" branch in Ottawa computes manually daily, but only for those accounts which had been "active" during the preceding day.

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e) Bank of British Columbia

The Bank of British Columbia has responded to competition from the B.C. credit unions by offering a "Bonanza Account" on which interest is calculated on the daily balance. That account was introduced on April 1, 1977. It is a savings-chequing account. Interest is compounded and posted monthly.

Under the terms of that account, a minimum balance of $500 must be maintained. There is a 25 cent charge per any debit item (this includes withdrawals and cheques.) Interest is paid at 5½%.

BBC also offers a non-chequing savings account in which interest is calculated on the minimum monthly balance. Interest is paid on that account at 5 3/4%.

f) Ontario Credit Unions

The Ontario Credit Union League reports that there are 1150 credit unions in Ontario of which 54 offer a "Plan 24" account along the lines of the "Plan 24" account offered by the credit unions in B.C. Each of these credit unions is computerized. The Ontario Credit Union League estimates the cost of Plan 24 at approximately 8% more than a 30-day deposit account bearing the same rate of interest. (This assumes the availability of computerization.

g) B.C. Credit Unions

There are 174 credit unions in B.C. Of these, 78 offer "Plan 24" which is a savings deposit account on which the interest is calculated on the basis of the closing balance at the end of each day. There are two others which have an account of their own offering daily calculation but call it by another name. Some of the remaining credit unions do not offer any deposit accounts at all (about 50) and only shares are issued to members and dividends are paid at the end of the period. Finally, 36 offer a "Plan 24" on which interest is computed manually.

h) Vancouver City Credit Union

Vancouver City Savings Credit Union is the largest credit union in Canada and the first in Canada to offer daily basis interest calculation. The plan was reportedly introduced in 1963. No other "true savings" deposit accounts are offered there. Interest is calculated on the basis of the daily closing balance and is

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compounded and credited (i.e., posted to the customer's pass book) every 6 months. The interest rate is 6% nominal annual i.e., 3% per period. There are no restrictions such as minimum balance requirements, minimum deposit requirements, restrictions on withdrawals, etc. There are no chequing privileges.

Vancouver City Savings offers a chequing account in which interest is calculated on the minimum balance during the month. Interest on that account is compounded and credited monthly.

i) United Services Credit Union

United Services Credit Union (one of the manual operation referred to earlier) calculates interest on the basis of the balance at the end of each day. The interest rate is 6½% nominal annual, i.e., 3¼% per period. Interest is compounded and credited to the account every 6 months. Interest is computed, however, at the end of every month and recorded on a subsidiary ledger card. The method of computing is, in effect, the average daily closing balance method.

Unlike Vancouver City Savings, United Services offers two types of savings accounts: "Plan 24" on which there are over 500 members and approximately $900,000 in deposits and a "demand non-chequing savings" account on which there are about 100 members and approximately $500,000 in deposits. The former pays interest at 6½% p.a. compounded semi-annually, calculated on the daily closing balance, and the latter pays interest at 7½% p.a., compounded semi-annually, calculated on the minimum monthly balance. (This compares with the 8% paid on term deposits.)

Plan 24 was instituted about 6 years ago. Unlike Vancouver City Savings, no "true chequing" accounts are offered.

There are no restrictions on the "Plan 24" account other than the requirement that the account must remain open for at least one month before any interest is paid.

Interest on "Plan 24" and the demand non-chequing savings account are both computed at the end of every month. Interest on both plans is credited to the customer's pass book at the end of every six months.

. . . 12

The 1% differential in interest rates between "Plan 24" and the demand non-chequing savings account is attributed to the higher operational costs associated with the former (i.e., the additional time required for computation and the higher level of account turnover reflecting the short-term application of funds by a larger proportion of depositors) and to the lower overall level of return to the deposit-taking institution from a daily vs. monthly basis of interest calculation. These factors are offset, however, at least in part, by an influx of new business, i.e., customers from other deposit-taking institutions who have been attracted by a daily balance basis of interest calculation.

## APPENDIX NO. 2

### Effective Annual Rates and Calculation of Earnings on Deposits

As explained in the main of the text, institutions will have to calculate and credit earnings to accounts at least once a year or at the time an account is closed for non-fixed term deposits. They will also have to calculate and pay earnings, on the basis of the disclosed rate, from the date of deposit to the date of withdrawal.

These requirements, however, do not prohibit institutions from calculating and/or crediting more frequently than annually. But in all cases, the amounts credited will have to reflect the requirements and yield at least the effective annual rate disclosed with a tolerance of 1/8 of 1%.

In order to facilitate calculations, certain assumptions are allowed:

1. A year could be defined to have 365 days with the additional day in a leap year disregarded as to its effects on the rate of earnings disclosed to depositors. If daily compounding was selected, the daily rate would be $Rd = (1 + Ra)^{1/365} - 1$ where Ra is the effective annual rate. Conversely, Ra would be equal to: $(1+ Rd)^{365} - 1$, that is the rate resulting from the compounding of the daily rate.

2. If monthly compounding was selected, a month could be deemed to be always 1/12 of a year and a day 12/365 of a month. This would make it possible to use a single monthly (or daily) factor corresponding to a given effective annual rate. In this case, the monthly rate would be

   $Rm = (1 + Ra^{1/12} - 1$ where Ra is the effective annual rate disclosed, and the daily rate would be Rd = Rm. 12/365.

3. The same reasoning would apply for other sub-annual periods (weekly, quarterly, semi-annually, etc.) In all cases the year could be deemed to be broken down into even sub-periods to allow for the use of a single periodic factor.

4. Finally, earnings would be rounded to the nearest cent, upper or lower.

For the purpose of illustration, sample tables showing monthly rates corresponding to a range of effective annual rates are attached.

CONSUMER AND CORPORATE AFFAIRS
MONTHLY INTEREST FACTORS
EFFECTIVE ANNUAL RATES

| RATE | FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.125 | .0033741726 | 8.125 | .0065310490 | 12.125 | .0095026334 | 16.125 | .0125369095 | 20.125 | .0153975630 | | |
| 4.250 | .0034744950 | 8.250 | .0066279866 | 12.250 | .0096763780 | 16.250 | .0126267914 | 20.250 | .0154856714 | | |
| 4.375 | .0035747072 | 8.375 | .0067247012 | 12.375 | .0097700270 | 16.375 | .0127174839 | 20.375 | .0155734961 | | |
| 4.500 | .0036740094 | 8.500 | .0068214934 | 12.500 | .0098635806 | 16.500 | .0128080871 | 20.500 | .0156613376 | | |
| 4.625 | .0037748019 | 8.625 | .0069181034 | 12.625 | .0099570389 | 16.625 | .0128986012 | 20.625 | .0157490945 | | |
| 4.750 | .0038746850 | 8.750 | .0070146116 | 12.750 | .0100504021 | 16.750 | .0129890265 | 20.750 | .0158367687 | | |
| 4.875 | .0039744589 | 8.875 | .0071110182 | 12.875 | .0101436706 | 16.875 | .0130793631 | 20.875 | .0159243547 | | |
| 5.000 | .0040741230 | 9.000 | .0072073233 | 13.000 | .0102368444 | 17.000 | .0131696111 | 21.000 | .0160118678 | | |
| 5.125 | .0041736800 | 9.125 | .0073035273 | 13.125 | .0103299237 | 17.125 | .0132597708 | 21.125 | .0160992980 | | |
| 5.250 | .0042731278 | 9.250 | .0073996303 | 13.250 | .0104229089 | 17.250 | .0133498424 | 21.250 | .0161866355 | | |
| 5.375 | .0043724673 | 9.375 | .0074956325 | 13.375 | .0105158000 | 17.375 | .0134398260 | 21.375 | .0162738905 | | |
| 5.500 | .0044716989 | 9.500 | .0075915343 | 13.500 | .0106085972 | 17.500 | .0135297217 | 21.500 | .0163610732 | | |
| 5.625 | .0045708228 | 9.625 | .0076873357 | 13.625 | .0107013009 | 17.625 | .0136195299 | 21.625 | .0164481838 | | |
| 5.750 | .0046698392 | 9.750 | .0077830371 | 13.750 | .0107939111 | 17.750 | .0137092506 | 21.750 | .0165351823 | | |
| 5.875 | .0047687484 | 9.875 | .0078786386 | 13.875 | .0108864280 | 17.875 | .0137988840 | 21.875 | .0166221139 | | |
| 6.000 | .0048675506 | 10.000 | .0079741404 | 14.000 | .0109788520 | 18.000 | .0138884303 | 22.000 | .0167089677 | | |
| 6.125 | .0049662460 | 10.125 | .0080695428 | 14.125 | .0110711830 | 18.125 | .0139778898 | 22.125 | .0167957323 | | |
| 6.250 | .0050648349 | 10.250 | .0081648461 | 14.250 | .0111634214 | 18.250 | .0140672625 | 22.250 | .0168824194 | | |
| 6.375 | .0051633176 | 10.375 | .0082600503 | 14.375 | .0112555674 | 18.375 | .0141565486 | 22.375 | .0169690352 | | |
| 6.500 | .0052616943 | 10.500 | .0083551557 | 14.500 | .0113476210 | 18.500 | .0142457484 | 22.500 | .0170555800 | | |
| 6.625 | .0053599651 | 10.625 | .0084501625 | 14.625 | .0114395826 | 18.625 | .0143348613 | 22.625 | .0171419539 | | |
| 6.750 | .0054581305 | 10.750 | .0085450710 | 14.750 | .0115314524 | 18.750 | .0144238894 | 22.750 | .0172282570 | | |
| 6.875 | .0055561905 | 10.875 | .0086398814 | 14.875 | .0116232304 | 18.875 | .0145128311 | 22.875 | .0173144896 | | |
| 7.000 | .0056541454 | 11.000 | .0087345938 | 15.000 | .0117149169 | 19.000 | .0146016871 | 23.000 | .0174006516 | | |
| 7.125 | .0057519955 | 11.125 | .0088292085 | 15.125 | .0118065121 | 19.125 | .0146904575 | 23.125 | .0174867437 | | |
| 7.250 | .0058497410 | 11.250 | .0089237257 | 15.250 | .0118980162 | 19.250 | .0147791426 | 23.250 | .0175730054 | | |
| 7.375 | .0059473821 | 11.375 | .0090181456 | 15.375 | .0119894294 | 19.375 | .0148677425 | 23.375 | .0176589673 | | |
| 7.500 | .0060449190 | 11.500 | .0091124684 | 15.500 | .0120807518 | 19.500 | .0149562574 | 23.500 | .0177449493 | | |
| 7.625 | .0061423521 | 11.625 | .0092066944 | 15.625 | .0121719837 | 19.625 | .0150446875 | 23.625 | .0178306517 | | |
| 7.750 | .0062396815 | 11.750 | .0093008236 | 15.750 | .0122631252 | 19.750 | .0151330330 | 23.750 | .0179163746 | | |
| 7.875 | .0063369074 | 11.875 | .0093948564 | 15.875 | .0123541766 | 19.875 | .0152212939 | 23.875 | .0180020181 | | |
| 8.000 | .0064340301 | 12.000 | .0094887929 | 16.000 | .0124451379 | 20.000 | .0153094705 | 24.000 | .0180875825 | | |

FACTOR IS THE MONTHLY DECIMAL RATE EQUIVALENT TO THE EFFECTIVE COMPOUNDED ANNUAL RATE.

CONSUMER AFFAIRS

## MONTHLY INTEREST FACTORS
## EFFECTIVE ANNUAL RATES

| E | FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR | RATE | FACTOR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | .0181730675 | 29.625 | .0211991802 | 33.125 | .0241297175 | 37.625 | .0269708368 | 42.125 | .0297280420 | 46.625 | .0324063540 |
| 0 | .0182584743 | 29.750 | .0212818250 | 33.250 | .0242098184 | 37.750 | .0270485347 | 42.250 | .0298034827 | 46.750 | .0324796705 |
| 5 | .0183438020 | 29.875 | .0213644162 | 33.375 | .0242898504 | 37.875 | .0271261679 | 42.375 | .0298788627 | 46.875 | .0325529298 |
| 0 | .0184290513 | 29.000 | .0214469340 | 33.500 | .0243696137 | 38.000 | .0272037366 | 42.500 | .0299541021 | 47.000 | .0326261319 |
| 5 | .0185142217 | 29.125 | .0215293786 | 33.625 | .0244497084 | 38.125 | .0272812409 | 42.625 | .0300294409 | 47.125 | .0326992770 |
| 0 | .0185993144 | 29.250 | .0216117500 | 33.750 | .0245295347 | 38.250 | .0273586810 | 42.750 | .0301046392 | 47.250 | .0327723652 |
| 5 | .0186843287 | 29.375 | .0216940485 | 33.875 | .0246092925 | 38.375 | .0274360569 | 42.875 | .0301797772 | 47.375 | .0328453965 |
| 0 | .0187692651 | 29.500 | .0217762741 | 34.000 | .0246889822 | 38.500 | .0275133686 | 43.000 | .0302548550 | 47.500 | .0329183711 |
| 5 | .0188541237 | 29.625 | .0218584270 | 34.125 | .0247686037 | 38.625 | .0275906167 | 43.125 | .0303298727 | 47.625 | .0329912890 |
| 0 | .0189389046 | 29.750 | .0219405073 | 34.250 | .0248481572 | 38.750 | .0276678009 | 43.250 | .0304048303 | 47.750 | .0330641503 |
| 5 | .0190236079 | 29.875 | .0220225151 | 34.375 | .0249276428 | 38.875 | .0277449213 | 43.375 | .0304797280 | 47.875 | .0331369551 |
| 0 | .0191082339 | 30.000 | .0221044506 | 34.500 | .0250070607 | 39.000 | .0278219780 | 43.500 | .0305545658 | 48.000 | .0332097036 |
| 5 | .0191927826 | 30.125 | .0221863139 | 34.625 | .0250864110 | 39.125 | .0278989713 | 43.625 | .0306293439 | 48.125 | .0332823957 |
| 0 | .0192772543 | 30.250 | .0222681052 | 34.750 | .0251656938 | 39.250 | .0279759013 | 43.750 | .0307040624 | 48.250 | .0333550317 |
| 5 | .0193616496 | 30.375 | .0223498245 | 34.875 | .0252449091 | 39.375 | .0280527679 | 43.875 | .0307787214 | 48.375 | .0334276115 |
| 0 | .0194459677 | 30.500 | .0224314721 | 35.000 | .0253240572 | 39.500 | .0281295714 | 44.000 | .0308533209 | 48.500 | .0335001353 |
| 5 | .0195302093 | 30.625 | .0225130480 | 35.125 | .0254031382 | 39.625 | .0282063118 | 44.125 | .0309278611 | 48.625 | .0335726031 |
| 0 | .0196143741 | 30.750 | .0225945524 | 35.250 | .0254821521 | 39.750 | .0282829892 | 44.250 | .0310023420 | 48.750 | .0336450151 |
| 5 | .0196984625 | 30.875 | .0226759853 | 35.375 | .0255610991 | 39.875 | .0283596038 | 44.375 | .0310767638 | 48.875 | .0337173714 |
| 0 | .0197824747 | 31.000 | .0227573471 | 35.500 | .0256399794 | 40.000 | .0284361557 | 44.500 | .0311511266 | 49.000 | .0337896719 |
| 5 | .0198664107 | 31.125 | .0228386376 | 35.625 | .0257187929 | 40.125 | .0285126450 | 44.625 | .0312254304 | 49.125 | .0338619169 |
| 0 | .0199502708 | 31.250 | .0229198572 | 35.750 | .0257975399 | 40.250 | .0285890717 | 44.750 | .0312996753 | 49.250 | .0339341064 |
| 5 | .0200340547 | 31.375 | .0230010059 | 35.875 | .0258762204 | 40.375 | .0286654360 | 44.875 | .0313738616 | 49.375 | .0340062405 |
| 0 | .0201177630 | 31.500 | .0230820839 | 36.000 | .0259548347 | 40.500 | .0287417380 | 45.000 | .0314479891 | 49.500 | .0340783193 |
| 5 | .0202013960 | 31.625 | .0231630912 | 36.125 | .0260333827 | 40.625 | .0288179770 | 45.125 | .0315220581 | 49.625 | .0341503429 |
| 0 | .0202849540 | 31.750 | .0232440281 | 36.250 | .0261118646 | 40.750 | .0288941555 | 45.250 | .0315960687 | 49.750 | .0342223113 |
| 5 | .0203684377 | 31.875 | .0233248945 | 36.375 | .0261902806 | 40.875 | .0289702713 | 45.375 | .0316700209 | 49.875 | .0342942247 |
| 0 | .0204518469 | 32.000 | .0234056908 | 36.500 | .0262686306 | 41.000 | .0290463251 | 45.500 | .0317439148 | 50.000 | .0343660831 |
| 5 | .0205351819 | 32.125 | .0234864169 | 36.625 | .0263469150 | 41.125 | .0291223171 | 45.625 | .0318177506 | 50.125 | .0344378867 |
| 0 | .0206184430 | 32.250 | .0235670731 | 36.750 | .0264251337 | 41.250 | .0291982475 | 45.750 | .0318915283 | 50.250 | .0345096355 |
| 5 | .0207016302 | 32.375 | .0236476594 | 36.875 | .0265032869 | 41.375 | .0292741163 | 45.875 | .0319652480 | 50.375 | .0345813295 |
| 0 | .0207847436 | 32.500 | .0237281760 | 37.000 | .0265813747 | 41.500 | .0293499237 | 46.000 | .0320389098 | 50.500 | .0346529690 |
| 5 | .0208677834 | 32.625 | .0238086230 | 37.125 | .0266593973 | 41.625 | .0294256697 | 46.125 | .0321125130 | 50.625 | .0347245540 |
| 0 | .0209507495 | 32.750 | .0238890006 | 37.250 | .0267373546 | 41.750 | .0295013544 | 46.250 | .0321860602 | 50.750 | .0347960845 |
| 5 | .0210336423 | 32.875 | .0239693087 | 37.375 | .0268152469 | 41.875 | .0295769779 | 46.375 | .0322595489 | 50.875 | .0348675606 |
| 0 | .0211164617 | 33.000 | .0240495477 | 37.500 | .0268930743 | 42.000 | .0296525405 | 46.500 | .0323329802 | 51.000 | .0349389825 |

FACTOR IS THE MONTHLY DECIMAL RATE EQUIVALENT TO THE EFFECTIVE COMPOUNDED ANNUAL RATE.

# ON THE DIRECT REGULATION OF INTEREST RATES

Consumer Research Staff Study

J. L. Evans

# On The Direct Regulation of Interest Rates

J. L. Evans

Direct regulation of interest through the imposition of ceilings on interest rates has been central to discussions of borrower protection for centuries. It is, therefore, not surprising that it has taken on significant proportions in the recent debates on Bill C-16, the Borrowers and Depositors Protection Bill. This paper is intended to examine the issue of ceilings in detail, to evaluate their usefulness and effects in light of recent empirical evidence.

It is generally agreed that the ultimate protection for borrowers is obtained when these individuals are well-informed and the market in which funds are made available is efficient, and competitive. In such a situation, borrowers are able to obtain funds at the lowest possible cost under the best possible terms. While it is unlikely that this ideal situation will ever be achieved, it is possible to create an environment representing a reasonable approximation, and to provide certain borrower remedies to minimize the impact of market imperfections which persist.

The necessary supply conditions for an effective market are that investment returns be free to adjust to changing demand conditions, that lenders employ these returns in determining the allocation of funds between markets, and that lenders be free to enter or leave the market. The conditions on the demand side of the market are that borrowers be well-informed as to the costs and conditions of alternative sources of funds, that they understand the terms and conditions associated with loans as well as their legal rights and responsibilities, and that they have access to a wide range of lenders.

The creation and maintenance of such conditions is the central purpose of the Borrowers and Depositors Protection Act, and the evaluation of the usefulness and effects of ceilings on interest rates must be conducted with this fact clearly in mind.

## A. The Rationale for Interest Rate Ceilings

There have been many arguments put forward to justify the imposition of ceilings on interest rates charged consumer borrowers. All of these rest upon one, or the other, or both of the following assumptions: 1) consumer borrowers are unable or unwilling to adequately protect their interests in dealings with lenders, and 2) the consumer credit market, or at least that portion of the market open to poorer risk borrowers, is imperfect and not subject to the discipline of competition and, therefore, borrowers are subjected to excessive interest charges and other unconscionable lender behaviour. Specific examples of such arguments are cited in Kawaja (25), Avio (1) and in the Report of the Royal Commission on Banking and Finance (37). In the latter reference, the commissioners made specific reference to the ceilings imposed under the Small Loans Act, stating that such ceilings "are necessary to protect small and inexperienced borrowers against exploitation". Their recommendation was to extend the coverage of the Small Loans Act from $1,500 to $5,000 and to adjust the rate ceilings on regulated loans to 2% per month on amounts up to $300 and 1% per month on amounts between $300 and $5,000. The Croll-Basford Report (11) subsequently supported this recommendation.

It is very important to note here that little serious and careful research was conducted into questions relating to the effectiveness of ceilings in dealing with credit problems of consumers, and the long-run effects of such ceilings on credit availability and credit costs. The following analysis will hopefully remedy this situation and bring recent research findings to bear on these questions.

## B. Objectives of Interest Rate Ceilings

The policy objectives to be achieved with interest rate ceilings are seldom clearly stated. However, the general objective often takes the form of a desire on the part of legislators-regulators to ensure that all borrowers receive funds at fair and equitable rates of interest and not be subjected to exploitation by lenders (see the Report of the Royal Commission on Banking and Finance; 37). Not so often stated is the underlying belief that if one has to pay more than some given percentage rate of interest for a loan, then one is better off without credit. As Avoi (1) indicates this translates into an unstated policy objective of attempting to deny credit to individuals where it is felt to be outside their long-term welfare interests.

## C. Analysis and Evidence

While the stated objective of providing funds to all borrowers at fair and equitable rates of interest is laudable, it is hollow upon analysis. This follows from an understanding of how lenders allocate funds in the market. Funds are allocated on the basis of return on investment in conjunction with the risk associated with receiving that return. If a ceiling is placed on the possible return, lenders will correspondingly reduce the level of risk they are willing to accept, withdraw funds from the higher risk segment of the market, and reinvest these funds elsewhere. This fact is well-documented in empirical research. In words taken from a University of California, Davis Law School study entitled Legal Problems in Consumer Credit (28), "the most immediately and widely recognized effect of usury laws is to determine which potential borrowers will have access to credit markets". This effect is further substantiated by the U.S. National Commission on Consumer Finance (32). The Commissioners state "rate ceilings in many states restrict the supply of credit and eliminate credit worthy borrowers from consumer credit markets" (pg. 48). Further general analysis of such exclusionary effects may be found in Carne and Trebilcock (6).

Specific empirical evidence of this effect is readily available. With regard to U.S. mortgage markets, Ostas (33) found that restrictive ceilings on mortgage rates in certain states led to a significant reduction in the volume of mortgage funds in comparison to funds made available in states where ceilings were not a factor. The same conclusion was reached by Robbins (38) in a separate study of U.S. mortgage markets. With regard to non-mortgage credit, Greer (18) found that "risk acceptance is positively and uniformly related to the height of legal interest rate ceilings governing consumer loans" (pg 1380). In other words, the lower the ceiling. the lower the level of risk accepted by lenders and, therefore, the lower the aggregate volume of loans made. Goudzwaard (17) similarly states that "low ceilings significantly reduce credit opportunities" (pg. 184). Both the Greer and Goudzwaard studies involved extensive samples of credit originations in U.S. markets. (For related supporting evidence see Johnson (21) and Shay (42).*

Legislators and others often argue that ceilings on interest rates are necessary to prevent lenders from reaping excessive profits at the expense of unwary borrowers. Empirical evidence does not support this position. The U.S. National Commission on Consumer Finance (9) states that

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*It is instructive to note that a similar result is obtained when rent controls are imposed so as to restrict the return to landowners. Where possible, affected landowners remove rental units from the market (for example, through condominium conversions), reduce the frequency and quality of repairs and maintenance, and discontinue investment in new rental accommodation. The result is a decline in the quality and quantity of rental accommodation. The current situations both in British Columbia and Ontario are cases in point.

> "a study of the industry revealed that the profit margins of various companies lending under different usury ceilings in different states did not vary significantly...the higher ceilings did not lead to excessive profits".

Further, Chapman and Shaw(7) found that

> "when laws permitted relatively high rates of charge, the average risk assumed by lenders tended to be higher, but that operating profits were not correspondingly higher" (pg. 88).

Finally, Durkin (15) found that "Small Loan Companies" in Texas, which are allowed to charge over 100% for loans of less than $100 (the average loan size being $65), had average profits of only 11.5% on equity. This compares with profits of 12.2% on equity for all other loan companies during the same period.

In view of these facts, it is clear that the stated policy objective of providing funds to all borrowers at fair and equitable rates is unattainable through the use of ceilings. Put simply, in our current economic system, one cannot force lenders to make funds available at unprofitable rates of return (see for example Shanks; 41). The evidence further indicates that the absence of ceilings does not lead to excessive profiteering by lenders but does lead to an expanded level of service to borrowers.

If the stated policy objective of interest rate ceilings is attainable, what then of the unstated policy objective of ensurin high risk borrowers do not have access to credit? In many neither is this objective achieved. Low income individuals most often the ones denied access to legitimate lenders b rate ceilings, turn to other marginal or illegal sources of

satisfy their needs. Specifically, they are forced to deal with vendor-creditors who disguise extremely high credit charges in the prices of the goods they sell on time payment schemes, or to loansharks (see Carne and Trebilcock; 6). These facts are well documented in areas where interest rate ceilings have been in effect. Avio (1), writing on the U.S. situation states that "ceilings inevitably impose costs on the borrowers with the poorest credit risks" by forcing them to deal with loansharks and unsavory vendor-creditors. Further, Jordan and Warren (22) state that "experience with the loanshark has made it clear that making certain loans illegal does not prevent those loans from being made" (pg. 392). The National Commission on Consumer Finance found that

> "the Arkansas usury provision (a 10% maximum) generates a society of illegal lenders who must resort to deceptive devices to perform what most agree to be a valuable and necessary social function, that of making credit available to high risk borrowers".

As Jordan and Warren (22) so aptly put it, "in the same way that Victorian morality breeds prostitution the usury laws breed the loanshark" (pg. 390).

This same situation has been found to exist in Canada's major centres, partially as a result of the exclusionary effects of the ceilings imposed under the Small Loans Act. These conditions are clearly evident from the Report of the Quebec Commission on Organized Crime (37a).

It should be clear at this point that ceilings do not achieve policy objectives which have been established for them. Indeed, act contrary to the interests of those in greatest need. In addition,

there is significant evidence that ceilings present side effects which work against even those borrowers who continue to have access to legitimate lenders by reducing competition and the general effectiveness of the marketplace. As Kawaja (25) states

> "excess profit lending and abusive collection practices stem from non-competitive conditions...the major source of non-competitive conditions are the general usury laws, which establish rate ceilings below the cost of extending certain kinds of consumer credit...their mischievious effects are widely recognized (pg. 159).

The University of California, Davis Law School study (28) sheds additional light indicating that while banks and other deposit taking institutions can exist comfortably within most ceiling structures, other lenders, who are forced to borrow funds in the capital markets, or from the banks, are not so fortunate. Ceilings squeeze these firms when their costs of funds rise, and in some cases result in their being eliminated from the market. A consequence is a reduced level of competition in the consumer loan market. With reduced competition, the remaining firms are subject to reduced constraints on their lending practices. In fact, the U.S. National Commission on Consumer Finance (9) states:

> "...legal rate ceilings in most states appear to stifle competition in several ways. In the first place, analysis indicates that excessive concentration of lenders appears to be closely related to low interest rate ceilings. Second, ceilings adversely affect the alternatives available to borrowers and restricts availability of credit. Third, they offer lenders convenient focal points for setting uniform rates and, without competition, these rates are sustained above normal competitive rates...reasonably competitive markets cannot be expected to exist where low rate ceilings have driven many competitors from markets" (pg. 148).

Johnson (21) in examining the situation in the State of Texas where relatively high ceilings existed indicated that

> "the movement towards concentration of lending business in the hands of large firms will accelerate if rate ceilings remain in effect and the cost of doing business continues to rise".

Warren (48) states that

> "it is probably due in large measure to the existence of legislative ceilings on finance charges and limited market entry that the consumer credit market has exhibited major imperfections" (pg. 963).

Finally, in a submission to the U.S. National Commission on Consumer Finance in 1973, the then U.S. Controller of the Currency, J.T. Watson stated that

> "...ceilings and restrictions (on entry) are often misplaced attempts to provide "fair" rates on consumer loans of various sizes in absence of intense competition but, as the Commission notes, such ceilings and restrictions serve to inhibit competition...the Commission correctly sees the role of new entry as crucial to stimulating and preserving competition in consumer credit markets".

As was indicated above, such entry is not likely to occur when restrictive interest rate ceilings are in place.

In addition to directly affecting the degree of competition in the market for consumer credit, interest rate ceilings, when institutionally selective, lead to market segmentation. This is a situation where different classes of lenders concentrate their activities in different sectors of the same general market. The result is further reduction in effective competition. As J.T. Watson, U.S Controller of the Currency in 1973 stated,

> "The consumer finance industry is highly segmented, both with regard to suppliers and users...(such) institutional segmentation stems from legislative constraints upon permissible ceilings on rates to be charged by certain (classes of) institutions."

This position is supported by Warren (47) who found that

> "owing in part to its usury legacy, the consumer credit market is highly segmented...the combination of market segmentation, barriers to entry and rigid rate ceilings has, in turn led to monopolistic conditions, administered prices, and, probably, an undersupply of loan credit" (pg. 964).

It is interesting to note that one of the "benefits" of the ceiling applied to Canadian Chartered bank lending rates in the early 1960's, as cited in the Report of the Royal Commission on Banking and Finance (37), was that "it shelters other institutions from undesirable competition." The fallacy in logic from a borrowers point of view is clear when one considers that removal of this restriction on bank lending in 1967 led to an expansion of the banks share of the consumer credit market from the 1967 level of 35%, to 60% in 1975. The obvious beneficiaries of this development were the many consumers who have subsequently been able to obtain loans at much lower rates than would otherwise have been the case.

Proponents of interest rate ceilings often cite the absence of effective competition, and a sincere doubt that it could ever develop, as grounds for imposing or retaining ceilings. However, as Kawaja (25) indicates "there are no (inherent) demand or cost-entry conditions in the credit industry" which justify such assertions. Similarly, Jordan and Warren (22) state that

> "there are no inherent barriers to entry in the credit market where barriers to competition are not imposed by law... There is no reason why competition in the credit market cannot be as effective as in any other market" (pg. 392)

Empiricial evidence supporting these observations is available. The example given above describing the massive increase in Canadian chartered bank participation in the consumer credit market when released from unrealistic restrictions is a compelling case in point. The University of California, Davis Law School Study (28) adds further support. They found that

> "the effect of higher ceilings drawing more capital into the money market was observed in Arkansas where increased capital funding of small loan companies was apparent during a short experience with liberalized ceilings."

Finally,, Chapman and Shaw (7) found that the advent of higher ceilings in several states has

> "brought consumer finance companies into sharper competition with commercial banks and others".

The Canadian experience strongly supports this observation.

Such evidence as has been presented indicates that the problem is not the inability of competition to operate in the consumer credit market but rather the inability of competition to operate effectively when constrained by factors such as ceilings and legally instituted market segmentation. There is strong support for the position that the "problem" cited by proponents of ceilings as justification for their use, has been in fact a problem which ceilings themselves have largely created. Empirical research indicates that the imposition of ceilings drives funds from the consumer credit market. It further indicates that removal of ceilings leads to flows of funds into that market. All things being equal, increased flows of funds into a market implies increased competition.

In addition to the evidence relating to supply conditions in the market there is also evidence that improvements in demand conditions are taking place. Dauten, Apelado and Warner (13) note that

> "as price levels and disposable personal incomes have increased, consumer borrowers have become more sensitive to interest rates, and have patronized primary lenders (banks, credit unions and caisses populaires) to an increasing extent" (pg. 107).

Also, Bandy, Day and Deutscher (2) found that

> "early evaluations of (U.S.) Truth-in-Lending have observed impressive gains in consumer knowledge about interest rates."

Such changes in borrower understanding have obviously contributed in recent years to the shift in Canada to bank, credit union and caisses populaire borrowing at the expense of more costly lenders.

Other market developments which are worth noting in that they will continue the trends mentioned above are cited by Warren (22). He indicates that two main sets of forces are at work:

> "1) strong trends towards more general risk allocation and abatement, represented by national health care, moves towards a guaranteed annual income, no fault compensation plans, disaster insurance and portable pensions which enhance the credit worthiness of consumers by stabilizing the flow of income; and
> 2) improved information accessibility which has, and will, result in a better informed borrower"

The Borrowers and Depositors Protection Act makes significant contributions to the second of these.

The evidence presented to this point is indisputable. Interest rate ceilings do not result in a situation where borrowers obtain funds at rates below those that would normally hold in the marketplace. In fact, the rates charged borrowers who continue to have access to credit after the imposition of ceilings tends to rise due to the adverse effects of ceilings on competition. Further, borrowers who are excluded from the legitimate market are not necessarily denied access to funds but rather may turn to illegal lenders or to marginal dealings with unsavory vendor-creditors. Effectively, the imposition of ceilings creates conditions which encourage illegal lending and run counter to the main thrust of serious legislation to protect borrowers; that being the creation and maintenance of an efficient and competitive consumer credit market.

## D. The Canadian Case

Currently in Canada interest rate ceilings apply in a limited sector of the consumer credit market; i.e., to loans under $1,500 made by non-bank money lenders. In 1975 lending by these firms represented only 1% of the total volume of consumer credit. In other words, 99% of all outstanding consumer loans were unregulated as to the credit charge rates.* It is important to note however, that even though regulated loans represent a small proportion of total consumer credit, they are the ones which are most clearly made to borrowers with poor credit risks. Therefore, if this market is adversely affected by ceilings, the main impact is being absorbed by borrowers whose access to credit is most severely limited and whose only alternative sources of funds are likely to be loansharks and unsavory vendor-creditors. An examination of the lending of these firms will allow determination of whether or not the effects described above have occured in this situation. Specifically, what have been the effects on loan volume, risk acceptance by lenders and profitability of firms operating under the Act.

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*Statistics Canada, Consumer Credit (Catalogue 61-004; December 1975). However, it is important to note that credit unions, caisses populaires and other non-bank money lenders are indirectly affected by the restriction that lenders charging above 1 percent per month on loans under $1500 be licensed under the Small Loans Act. To avoid this licensing requirement, these lenders "voluntarily" restrict their rates, and thus their risk acceptance. Consequently, a measure of the effects of the ceilings under the Small Loans Act based upon the lending of licensed lenders significantly understates the scope of the problem.

The evidence on small loan activity has been considered over the period 1965 to 1974. This evidence indicates that small loan lending by firms licensed under the Small Loans Act has decreased absolutely since 1968 (when rates in general began their major rise and when interest rate ceilings began to constrain lenders), while lending by these firms in other non-regulated areas has increased substantially. For example, in 1965 these firms made $627 million in small loans and $238 million in "other business". In 1974 these figures were $297 million and $1,163 million respectively. During this period, therefore, these firms reduced regulated small loans from 72% of their portfolio to 20%. Related to this was the decline in the profitability of small loans. In 1965 these firms earned gross profit on their regulated lending of $16.6 million; this figure has declined steadily from a high of $17.6 million in 1966 to the point where losses were incurred from 1972 onward, reaching a figure of -$8.1 million in 1974. Further, the number of firms licensed under the Small Loans Act declined from 83 to 41 during this period (see Appendix A). It is equally important to note that during this same period, the incidence of illegal lending (loansharking) increased substantially (see the Report of the Quebec Commission on Organized Crime; 37a).

It is clear that the evidence presented above with regard to the effects of ceilings under the Small Loans Act strongly supports the discussion presented earlier. All of the expected effects are readily apparent. With this evidence it would be very unwise to introduce a system of ceilings under the Borrowers and Depositors Protection Act, especially when one considers that this Act will apply to all consumer credit granted in Canada and not just to the limited segment of the market as is now the case under the Small Loans Act.

## E. The Case in Other Countries

While there are those in Canada favouring the imposition of ceilings on interest rates, it is instructive to note that legislative trends in other countries are in the opposite direction. There have not been legislated interest rate ceilings on loans made in the United Kingdom since 1854 and no such ceilings were adopted in the new Consumer Credit Act, 1974. There are no ceilings on consumer loans in Australia, Austria, France, Germany, New Zealand, Sweden or Switzerland even though all of these countries have strong and progressive consumer protection legislation (see Warren; 48). In the United States where the use of ceilings is widespread, extensive research and study have led the National Commission on Consumer Finance (9) to recommend

> "that policies designed to promote competition should be given the first priority, with (upward) adjustment of rate ceilings used as a complement to expand the availability of credit. As the development of workably competitive markets decreases the need for rate ceilings to combat market power in concentrated markets, such ceilings may be raised or removed" (pg. 147).

The trend in the U.S. (the only western nation which makes extensive use of ceilings) is to seriously question rate ceilings and to emphasize the need to develop competitive consumer credit markets. Clearly, researchers in the U.S. have now decided that such ceilings are not in the public interest. The evidence and resulting trends are clear.

In Canada, we have not had general rate ceilings and, therefore, have the basis for an effective and competitive market. Indeed, the move in Canada has been away from direct regulation of interest rates. This is witnessed by the removal of constraints on Bank lending rates in 1967 and the removal of constraints on NHA mortgage loan rates shortly thereafter. Both of these actions have been beneficial from the borrowers point of view.

The problem area remains the market for poorer risk borrowers which has been stifled by the restrictive provisions in the Small Loans Act. Clearly it would be a mistake to expand the scope of rate ceilings in view of their obvious effects. Rather, efforts should be made to promote vigorous competition in the higher risk market where it is now lacking. This is precisely the objective which has been established for the Borrowers and Depositors Protection Act. To enhance borrower understanding, and thereby to promote honesty, fair dealing and effective competition by lenders, the Act provides for full disclosure, regulation of credit advertising, standardization and simplification of terms, including rate calculation methods, an information and education program, and the removal of ceilings under Small Loans Act. Closely related to the Act will be a program to stimulate the entry of firms into the higher risk loan area. To enhance borrower protection in those areas where market imperfections persist there are the unwarranted rate, restrictions on allowable collection practices, liberalized prepayment provisions and clear provisions for an effective administration of the Act; all of which will go far towards ensuring that lenders conduct their business in a fair and prudent manner. Finally, there are strong criminal sanctions to allow the effective action against those lenders who continue to act in an irresponsible fashion. We are convinced that these provisions are sound and will provide the best possible borrower protection. The imposition of rate ceilings would be a major error which would operate against effectiveness of the Act and against the best interests of the public in the long run.

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APPENDIX "A"

Statistical summary of Annual Reports of the Superintendent of Insurance for Small Loans Companies and Money Lenders (1965 - 1974) ('000)

| | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) Total # of loans | 1,556 | 1,493 | 1,470 | 1,456 | 1,351, | 1,026 | 918 | 867 | 803, | 648, |
| a) 1 - 500 | 677 | 630 | 592 | 571 | 500 | 351 | 317 | 308 | 286 | 214 |
| b) 500 - 1000 | 678 | 604 | 609 | 593 | 602 | 535 | 443 | 406 | 381 | 322 |
| c) 1000 - 1500 | 202 | 260 | 269 | 292 | 249 | 140 | 158 | 153 | 136 | 112 |
| 2) Loans $ value | | | | | | | | | | |
| a) 1 - 500 | 167,040 | 158,232 | 150,779 | 146,508 | 135,055 | 100,738 | 88,227 | 85,594 | 80,932 | 62,372 |
| b) 500 - 1000 | 505,661 | 430,813 | 433,099 | 414,137 | 422,060 | 390,280 | 317,506 | 288,830 | 271,613 | 229,370 |
| c) 1000 - 1500 | 231,950 | 284,423 | 293,319 | 317,542 | 266,163 | 146,075 | 167,501 | 164,964 | 146,804 | 120,462 |
| d) TOTAL | 904,651 | 873,509 | 877,198 | 878,187 | 823,278 | 637,094 | 573,233 | 539,389 | 499,349 | 412,204 |
| e) repayment of outs. balance | 428,479 | 415,869 | 408,480 | 398,545 | 353,887 | 268,540 | 218,611 | 188,076 | 163,969 | 126,033 |
| f) net new funds loaned | 476,172 | 457,640 | 468,718 | 479,642 | 469,391 | 368,554 | 354,623 | 351,313 | 335,379 | 286,172 |
| 3) Balances outstanding(1) | | | | | | | | | | |
| a) Small Loans | 627,526 | 647,887 | 635,822 | 619,218 | 595,619 | 524,817 | 439,644 | 383,109 | 340,678 | 297,518 |
| b) Large Loans | 189,910 | 226,812 | 286,119 | 345,662 | 667,893 | 708,545 | 646,208 | 797,484 | 847,595 | 1,050,208 |
| c) C. Sales contracts | 48,560 | 45,827 | 34,211 | 46,084 | 66,021 | 64,244 | 54,454 | 69,873 | 93,321 | 112,655 |
| 4) Gross Profits on Small Loans(2) | 16,634 | 17,589 | 15,493 | 11,110 | 8,427 | 2,148 | 233 | -344 | 604 | -8,100 |
| " " " Large Loans | 10,888 | 15,107 | 19,274 | 24,470 | 42,921 | 53,358 | 59,557 | 65,030 | 65,297 | 61,620 |
| 5) Number of Firms(3) | 89 | 83 | 76 | 74 | 49 | 49 | 45 | 45 | 43 | 43 |
| 6) Delinquency Rate | | | | | | | | | | |
| a) Delinquent balances | 144,166 | 156,665 | 148,448 | 143,348 | 145,734 | 142,143 | 121,166 | 96,992 | 79,937 | 68,499 |
| b) as a % total balances | 23% | 24.2% | 23.3% | 23.1% | 24.4% | 27.1% | 27.6% | 25.3% | 23.5% | 23.1% |
| c) Net write-offs as % of total small Loans | 1.4% | 1.6% | 1.7% | 1.8% | 1.8% | 2.6% | 3.0% | 2.7% | 2.5% | 2.7% |
| 7) Proportion of Small Loans to total CONSUMER CREDIT | | | | | | | | | | |
| a) total consumer credit(4) | 7,157M | 7,778M | 8,616M | 9,856M | 11,134M | 11,706M | 12,673M | 14,890M | 17,682M | 20,566M |
| b) Proportion of Small loans(5) | 8.8% | 8.3% | 7.4% | 6.3% | 5.3% | 4.5% | 3.5% | 2.6% | 1.9% | 1.4% |

(1) Net of unearned charges, Dec.31st

(2) Before income taxes and before increase in reserves for bad debts

(3) Number of Head Offices

(4) STATCAN Cat. no. 64-001 Consumer Credit, Dec.1975, table 5

(5) Line 6(a) ÷ by Line 7(a)

Doc. No. TFCC 12/79/-02

# MORTGAGE PREPAYMENT

## Issues

There are two broad issues. Should consumers be granted the right to repay loans and mortgages early; that is, should borrowers have the right to get out of debt as soon as they are able, and should the government intervene to place that right in every consumer credit contract? Second, given that the government will grant a right to prepay, in either loans or mortgages, should the lender be able to exact his genuine damages? Or a penalty?

## Current Practices - Mortgage Loans

1. In some mortgages there is no mention of prepayment. Since these mortgages are a contract to make regular monthly payments, if the borrower wishes to prepay, the mortgagee (lender) can impose conditions. It is as though the two parties are negotiating a new agreement or as though they are negotiating an out-of-court settlement of the damages that may have been suffered by the lender.

2. Certain mortgages permit an annual maximum prepayment, for instance, 5% of the principal sum each year without penalty. If the borrower wishes to pay more than the 5%, then he faces the same situation as the borrower in example 1.

3. Certain mortgages permit prepayment with one or more conditions: a) the borrower cannot prepay in the first year; b) if he prepays in the second year he must pay a 12-month interest penalty; in the third year, nine months; in the fourth year, six months; and in the fifth year, three months. Other mortgages stipulate a flat six-month or three-month penalty for prepayment. Although a six-month or three-month penalty in a mortgage might be justifiable if the borrower repays in the first year of a five-year term, the same payment enforced in the last three to six month period of a mortgage could clearly be construed as a penalty and perhaps even as unconscionable.

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4. Credit unions and caisses populaires have permitted early repayment (probably as a philosophical matter since their inception). Other institutions such as the major banks and trust companies now offer a prepayable mortgage at ¼% or ½% above the conventional mortgage rate. On a $40,000 mortgage, ¼% per year yields $100 per year. If a mortgage has a five-year term then a person paying ¼% per year more will pay $500 for the right to prepay. If he prepays after four years, he will have paid $400 for the right, after three years, $300, after two years, $200, and after one year, $100. (Those figures are approximate since after each year, he will have less principal outstanding and ¼% of the net principal will be progressively less and less than $100.) Two points should be noted: a) If the borrower pays ½% rather than ¼% then the amounts paid per year are simply doubled. b) Paradoxically, the borrower who repays very early pays only a small premium for having that right whereas the borrower who repays after three or four years pays a higher premium for the right to prepay.

Market Practice - Loans

Many institutions use the interest-bearing method to calculate the amount of interest accrued to the payment date and the amount of principal outstanding. Among these are a number of finance companies including Household and Avco and all except two of the banks. As a result of using this method, these lending institutions permit the prepayment of the principal outstanding plus the interest accrued to date without penalty.

Other lenders, including the two banks use the rule of 78's or the sum of the balances method of calculation when a prepayment is made. According to this method of calculation, the borrower must repay the total amount of all instalments including principal and interest to the end of the loan term. But the borrower receives a rebate of a part of the interest. The rebate is determined by adding together the digits in the term of the loan: in a one-year term, this is 12 plus 11 plus 10 plus 9 plus 8 plus .... plus 2 plus 1, which is 78.

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If the borrower repays after six months of a twelve month term, he receives a rebate of 21/78ths of the total interest he has paid. Even with the interest-bearing method, in six months he would have paid more than half the total interest payable in a year. However, the borrower would not have paid 57/78ths and therefore loses by the application of the rule of 78's. The figure "21" in the fraction 21/78ths comes from adding 6 plus 5 plus 4 plus 3 plus 2 plus 1. In brief, the rebate is relatively small when this method is used and, in the result, the borrower pays more than the principal outstanding and the interest accrued to date of prepayment.

Other Miscellaneous and Extraneous Facts

1. We do not know how many borrowers repay early or try to do so each year. Since people borrow money to purchase products (goods and services) which they cannot afford, it is fair to hypothesize that few of them then suddenly have money to repay early. It is arguable then that a small proportion of borrowers have the wherewithal to make substantial prepayments. Indeed, most make an attempt to stretch out the term of the loan and get a minimum acceptable monthly payment to ensure that they can meet the payment given the constraints of their personal cash flows.

2. There is a difference between mortgages and loans with respect to the matching of funds. Matching simply means that the lender offers a borrower particular funds which he has obtained from a depositor on a long-term basis at a fixed rate of interest. Mr. Jones purchases a 10% guaranteed investment certificate from People's Trust Company for 5 years and People's Trust Company lends it to Mr. Smith for 5 years at 14%.
Some lenders have indicated, in the course of the research on the Borrowers and Depositors Protection Bill, that matching is not a problem - that there is much less matching than other lenders let on. It became clear in the course of our discussions with lenders that there is very little if any matching of the funds used for smaller consumer

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loans. There may, however, be more matching of the funds used for mortgages. In particular, the Victoria and Grey Trust Company claims that almost all mortgage funds are matched, at least in their business.

3. Section 6 of the Small Loans Act permits the prepayment of all loans under $1500 that are made by any institution covered by that Act, i.e., any non-bank.

4. Section 10 of the Interst Act was aimed at mortgages which had a term longer than 5 years - that is, it was aimed at mortgages that had a term the same length as the amortization period, usually 20 years. It appears to permit prepayment of such mortgages on any instalment date after the fifth anniversary of the mortgage. In addition, it appears to say that such prepayment can be made without penalty if three month's notice is given. However, the courts have interpreted it to say that in any case where a mortgage is repaid early after the fifth anniversary of the mortgage, the borrower must pay a three-month penalty. The National Housing Act has a prepayment system which is described briefly in the attachment (Annex A).

5. There is a well-established principle of equity which is applied by Canadian courts in many situations. The courts will not enforce the payment of a "penalty". A penalty is a sum stipulated in a contract that must be paid by the party acting in breach of the contract where the sum is so high as to "terrorize" the party not to act in breach. One major test of whether or not a sum is a penalty is to consider its relation to the actual loss that will be suffered from a breach. Mr. A contracts to deliver 1000 typewriters to Mr. B on December 4 and he must pay $50,000 for acting in breach. He delivers 999 typewriters. The $50,000 would likely be construed as a penalty, and Mr. B would not be able to recover $50,000. He would recover his actual damages. However, if the sum of money stipulated in the contract is a genuine estimate of damages that will be suffered in case of the breach of contract then the victim can recover. In short, a penalty is a sum which is not a genuine estimate of damages but rather a threat to ensure good behaviour under the contract.

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Unfortunately, this doctrine has never been applied to mortgages.

Mortgage Prepayment - Alternatives

In this discussion five alternatives are described. There may, of course, be other options available which are not mentioned in this paper.

Option 1 - Market Forces

The mortgage which is prepayable without penalty is offered now. It has been offered for some time by credit unions and caisses populaires, more recently by a number of trust companies and finally by the five major chartered banks. As noted above, the chartered banks and trust companies charge an extra ¼% or ½% above their conventional mortgage rate if the borrower wants a prepayable mortgage. The institutions have not used the prepayable mortgage as a marketing gimmick and therefore it has not become widely known.

In outlying areas where there is little competition many people are probably not aware of its existence and it is possible that it is not even offered. In these areas, full information and the competition that full information usually brings, are virtually non-existent. In addition complaints are still received of abuses in this area, especially with respect to smaller lenders. Hence, while we may be able to bring larger lenders into line on the prepayment issue, rules still would be necessary to deal with geographical market segmentation (problems in outlying areas) and problems with smaller lenders lending to high-risk, low-income borrowers.

As noted above, the cost to the consumer of a prepayable mortgage on which the consumer pays ¼% per annum above the conventional rate is approximately $500 over a five-year term. A three-month penalty on a $40,000 mortgage, by comparison, would be approximately $1200. Even if a consumer is paying ½% for the prepayable mortgage, this would yield a cost of $1,000 over five years. Hence, the market is putting a price on the prepayable mortgage: when rates are relatively lower, 10% to 12%, the prepayment rights costs approximately ¼% or one to two months interest; when rates are relatively higher, 12% to 14%, the prepayable mortgage costs ½% or approximately two months interest.

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The differences are not that great. One must consider that where there are penalties permitted and used, the penalty is paid by the person prepaying and only that person. There is no cross-subsidization. Where a consumer enters into a prepayable mortgage, however, he is sharing the risk that he might prepay with all other consumers who also purchase prepayable mortgages. That is, the borrower is ensuring himself against the risk that he might wish to repay early. Some borrowers do repay early, others do not. The ones who do not cross-subsidize the ones that pay early by continuing to pay the ¼% for the full term of the mortgage.

Presumably, however, the lenders, in setting the price of a prepayable mortgage at ¼%, have taken into account the principle of adverse selection. (According to that principle those who are most likely to repay early will purchase the prepayable mortgage and those least likely to prepay will purchase conventional mortgages and face the consequences of paying a penalty upon early repayment. From the lender's point of view, all those purchasing prepayable mortgages will be the worst risks and the others will select themselves out of the so-called insurance fund.) Assuming the lenders have taken account of this principle, then the price of ¼% or ½% can be considered a realistic assessment of the cost to lenders of permitting mortgages to be prepaid. For this reason, one could estimate that a penalty of three month's interest is reasonable, if not on the high side, and a penalty any greater than three months would seem very high given the price set in the market.

Option 2 - The National Housing Act Model

This model is described on the first page of the attachment (Annex A). Basically it provides for a right to prepay 10% of the principal outstanding on the first and second anniversaries of the mortgage. On any regular payment date after the third anniversary, all or any amount of the principal outstanding can be repaid. In all cases, prepayments are subject to a penalty equal to three months of interest on the amount prepaid or to the interest for the balance of the term, whichever is smaller.

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Option 3: The BDPA Model

This is a more sophisticated model which removes any financial incentive whatsoever for the borrower to repay early. The BDPA model does not permit any prepayment penalty where the interest rate current at the time of repayment is ½% or more higher than the interest rate in the mortgage contract. In all other cases a penalty is permitted. The penalty is made up of two major components. The first component is a fixed administrative cost factor which declines on a linear basis over the term of the mortgage. That is, the administrative costs of the mortgage are assumed to be 1½% of the principal of the mortgage. If the mortgage is five years (60 months) then that administrative cost is divided in 60ths. If the mortgage is prepaid after 43 months, then the remainder of the administrative cost must be paid as part of the penalty, in this case 17/60ths. The second component of the penalty is made up of the so-called present value of the difference between a) the flow of interest payments that the lender will receive as a result of reinvesting the prepaid money at the current lower interest rate, and b) the flow of interest payments the lender would have received had the borrower continued to pay until the end of the original mortgage term. These factors and the other assumptions involved in the BDPA model are described with more care and in greater detail in the attachment (Annex A).

Option 4: The Linear Reduction Model

In this model, the Legislature simply sets a maximum penalty that can be charged for a given term. For instance, a mortgage with a five-year term could be subject to a maximum penalty of five months. Again, the term would be divided into periods, for instance a five-year term into 60 months. If a borrower prepaid after 43 months, he would be subject to a maximum penalty of 17/60ths of the maximum penalty set for a five-year term. To state it more simply, the penalty would decline by 1/60th for each month that passes.

A number of other factors can be built into this model. For instance, drawing on the BDPA model and on the deal that has been offered by the Canadian Imperial

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Bank of Commerce for some time, it could be required that where the interest rate currently offered on the same type of mortgage by the same lender is ½% or more higher than the rate in the mortgage contract then there would be no penalty permitted.

Option 5: The General Statement

According to this model, the Legislature would simply make a broad statement about the types of penalties that would be or would not be permitted. For instance, the Legislature could grant the right to prepay a mortgage. It could then go on to restate the equitable principle that a lender could stipulate a genuine estimate of his damages where a borrower exercises the right to prepay, but that a lender could not collect any payment in the nature of a penalty where the borrower exercises the right to prepay. The weakness of this approach is that, while the case law on penalties is fairly well-developed, the courts still might need some guidance on what would constitute a penalty in the mortgage prepayment situation, a situation much more complex from an actuarial and accounting point of view than most other fact situations faced by the courts in penalty cases.

Loan Prepayment - Alternatives

The discussion of the three alternatives in this section is much simpler.

Option 1: No Penalty

This alternative was proposed in the Borrowers and Depositors Protection Bill and, in the main, industry did not object to it. Where there is no matching of funds and where the interest-bearing method of calculation is used, prepayment without penalty appears to cause no concern whatsoever. Since there is apparently no matching of funds among financial institutions and since most are on the interest-bearing method, this does not seem to create a problem for them.

There may, perhaps, be some problems for vendor-creditors whose calculation methods are not as up to date. For the most part, however, their problem is not early repayment but rather no payment at all.

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Option 2: A Reasonable Administrative Fee

According to this model, penalties would not be permitted but the Legislature would permit a reasonable administrative fee to be demanded upon an early repayment. If it is believed to be necessary, a maximum fee could be set by regulation.

Option 3: A Linear Decline Model

This model would be similar to that described in Option 4 under mortgage alternatives.

Decisions Required

I. Should there be a right to prepay? That is, does the government want citizens to have a right to get out of debt when they are able to do so, in spite of a contractual agreement to the contrary?

   a. Mortgages?

   b. Non-mortgage loans?

   c. Should second mortgages be treated like mortgages or like loans?

II. Given that a person can, in any event, act in breach of a contract, or that the governments grant a right to prepay, does the government want to give lenders and the courts guidance on the amount that should be awarded or permitted to lenders as damages for the breach of a contract?

   a. On mortgages?

   b. Non-mortgage loans?

   c. Should second mortgages be treated like mortgages or like loans?

III. Prepayment of Loans

   Which Model Should be applied?

   A. No penalty model?

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B. Administrative fee model?

C. Linear decline model?

IV. Prepayment of Mortgages

A. Market Forces?
B. The National Housing Act Model?
C. The BDPA Model?
D. The Linear Reduction Model?
E. The General Statement Model?

V. Prepayment of Second Mortgages

Which Model should be applied?

November 24, 1977
Consumer Research Branch

# MORTGAGE PREPAYMENT PENALTIES

Prepayment of mortgage loans has been and still is an area of frequent abuse in that mortgage lenders often impose on borrowers penalties far in excess of their real costs of accepting a prepayment. Many complaints have been made to the Department of Consumer and Corporate Affairs in this regard. Cases on record indicate that penalties as high as the equivalent of 15 months of interest on the amount prepaid have been levied on consumers as condition for accepting a prepayment. In some cases, heavy penalties were charged in situations where the contract rate was significantly lower than the prevailing market rate with the result that the lender was able to re-invest the prepaid mortgage at more profitable conditions after cashing a sizable premium from the borrower.

## Rights to prepay under current law

In the context of current federal law, mortgages made under the National Housing Act benefit from limited prepayment privileges subject to a penalty. The N.H.A. provides for a right to prepay ten percent of the principal outstanding on the first and second anniversaries of the mortgage and, on any regular payment date after the third anniversary, all or any amount of the principal outstanding. In all cases, prepayments are subject to a penalty equal to three months of interest on the amount prepaid or to the interest for the balance of the term, whichever is smaller. It should be noted however that the N.H.A. remains silent on the conditions that should apply for prepayments that do not meet the conditions specified above. For example, a borrower who, for any reason, would want to prepay his mortgage loan before the third anniversay would be left with no other recourse but to negotiate the conditions under which the lender would accept the prepayment, unless his contract stipulated specific conditions to this effect. So far as we could ascertain, most mortgage contracts do not grant such general right to prepay or do so in a way that leaves flexibility to the lender about the conditions under which a prepayment could be made.

Conventional mortgage loans not falling under the scope of the National Housing Act are covered by Section 10(1) of the Interest Act which stipulates in essence that if a mortgage contract is made for a term of more than five years, then the borrower could at any time after the fifth anniversary prepay all of the principal outstanding subject to a three months interest penalty. This provision is also found in some provincial mortgage laws, for instance, Section 17(1) of the Mortgages Act of Ontario.

The effect of this provision has been that mortgage lenders have gradually come to adopt the five-year rollover mortgage where, regardless of the length of time over which the loan is amortized, the contract is made for a term of five years (or less) at the end of which the unpaid principal becomes due entirely (baloon payment) and where, in most cases a new contract is made between the parties to re-finance the principal outstanding. In this fashion, mortgage lenders have succeeded in avoiding the intent of the Interest Act provision by effectively re-locking-in borrowers from five years to five years. The same is true of the N.H.A. provision where de facto the borrower only has a right to prepay all or a substantial part of his mortgage loan from the third to the fifth anniversary at which point he is locked-in again for three years by entering into a new contract.

Because of insufficient regulation, current practices vary widely and while some lenders have acceptable prepayment penalty policies from an equity point of view, other clearly abuse the borrowers that must or want to prepay for one reason or another. For example, many credit unions and caisses populaires accept prepayment of mortgages at any time with no penalty. Some of the chartered banks will accept full prepayment at any time subject to a fixed three months penalty. Some Trust Companies will accept full prepayment for such reasons as bona fide sales, death, sickness or other unusual circumstances pointing to potential collection problems in the future. Penalties charged in these cases range from three to six months depending on the time left to term but they could be higher if the prepayment differential between contract and current rates for the remaining term yields a higher dollar figure than the six months one. In addition, unamortized amdinistration costs may be charged.

At the end of the spectrum, complaints on file with Box 99 indicate that some lenders charged substantial penalties anywhere up to fifteen months of interest in situations where the mortgage was assumed entirely by the new owner or refinanced by the same lender at a higher rate.

Mortgage provisions in the BDPA

In its original version, the Borrowers and Depositors Protection Bill provided for prepayment rights and limits on penalties similar to the ones extended under the N.H.A. but with the additional feature that the renewal or re-financing of a mortgage contract would not allow for a new lock-in period. In effect the provision only allowed for a partial lock-in during the first three years of the entire amortization period of the mortgage loan with an unlimited right to prepay after the third anniversary subject to a three months interest penalty. For mortgages having a term of less than three years or featuring a variable rate clause, the lock-in period was only one year with a full prepayment right after one year, also subject to a three months interest penalty.

In representations made to the Department and during the House Committee hearings, some mortgage lenders have contended that such liberal prepayment privileges increased significantly the risk of mismatching assets and liabilities and that as a result, funds would likely be withdrawn from the residential mortgage market. Mortgage lenders such as Trust Companies, Life Insurance Companies and Mortgage Loans Companies have a relatively long-term liability structure since they acquire their funds through the sale of annuity plans, guaranteed investment certificates or debentures.

Lenders fear of unrestricted prepayment rights is not so much related to the fact of prepayment as to their inability to predict when such prepayment might occur. Most lenders are willing to allow prepayment in the event of the sale of a mortgage property at arms-length because property transactions can be predicted in the aggregate with relative accuracy. As such, lenders can adjust their liability structure to account for this factor.

But in situations where rates decline sharply on the market, a low prepayment penalty can induce borrowers to re-finance their mortgages at a lower rate, leaving the financial institutions in a tight intermediary position since rates guaranteed on certificates cannot be modified. While institutions like banks, credit unions, and caisses populaires do not have a significant problem in this regard as they acquire most of their funds through deposit instruments where the rates offered could be varied on short notice, the situation would be intolerable for the other mortgage lenders who raise their funds on a fixed term basis. Given the importance of this category of lenders in the mortgage market, the risk of mismatching assets and liabilities must be considered seriously and a liberalized prepayment system must incorporate this factor.

In order to do so, it is necessary to examine the reasons why borrowers may decide to prepay. These include the sale of the mortgaged property, the need to settle an estate upon the death of the mortgagor, a decline in interest rates to a level below the rate in the mortgagor's contract, etc. Of these, the latter is the crucial problem, and the one with which we must deal if we are to allow more liberalized prepayment rights. What is the mechanism we are dealing with? Suppose a mortgagor takes out a mortgage at 12% and rates subsequently decline to 9%. Clearly, the borrower is wise to refinance at the lower rate since the present value of the payment stream at 9% is much less than that at 12%. A disincentive to such rate-induced prepayment is the introduction of a prepayment penalty.

For example, ne has to pay a three months interest penalty in order to prepay, then for a given time to maturity of the mortgage, a larger drop in rates is required to justify prepayment than would be the case if no penalty were applied. This follows since some, if not all, of the benefits to the borrower resulting from prepayment are absorbed by the penalty. However, a fixed penalty is only a partial answer since a rate drop can still occur that justifies prepayment by all borrowers. On the one hand, while the lender's uncertainty may be reduced by a fixed penalty, it is not eliminated unless the size is inordinately large. On the other hand, while a very large fixed penalty protects the lender from rate-induced prepayments, it is inequitable to borrowers who must prepay for other reasons when current rates are near contract rates. That is, these borrowers are forced to pay far too much for the right to prepay.

The answer to this problem lies in a penalty structure that reflects the expected loss to the lender (gain to the borrower) resulting from prepayment. Several of the Trust Companies now employ just such a system. With this approach, one can allow an unrestricted right to prepay but discourage rate-induced prepayment with appropriate prepayment penalties. At no time does a borrower pay more by way of penalty than is economically justified. On the one hand, if the current and contract rates are close at the time of prepayment, the penalty required is small or may indeed be zero if current rates exceed contract rates. On the other hand, if current rates are far below contract rates at the time of prepayment, the penalties must be larger. The size of the maximum likely penalty may be constrained by restricting the time over which such a penalty is computed. If we select a five-year period as is the current practice, then the penalty becomes the loss to the lender from the point of prepayment to the end of this five year period.

The question at this point is whether or not such a system of unrestricted prepayments subject to appropriate penalties is acceptable to lenders. As pointed out earlier, their main concerns relate to unpredictable rate-induced prepayments and to their ability to lock their investments up for a fixed period. They are however prepared to allow prepayment for reasons such as sale, settlement of estates, etc. Under the proposed system there would be no incentives to prepay on grounds other than these because rate-induced prepayments are discouraged by a penalty. Moreover, if a prepayment is made in circumstances such as sale or death, the proceeds to the lender from reinvestment of the prepaid principal plus the penalty would yield essentially the same returns as the prepaid mortgage would otherwise have.

The revised mortgage proposals

Based on the above analysis the revised mortgage proposals as set out in the amendments to Bill C-16 are governed by the general principles that borrowers should be granted an unlimited right to prepay all or part of their mortgage loans at any time during the life of the mortgage but that such prepayments should be subjected to penalties that realistically reflect the lenders' costs of accepting these prepayments.

More specifically, the revised proposals will stipulate that,

1) Any residential mortgage loan on a property having four or fewer dwelling units and to which a borrower is a party can be prepaid in full or in part, on any regular payment date, including the seven days prior to the regular payment date, subject to a penalty or not, as the case may be, and provided the prepayment is for a sum that is at least,

a) five percent of the outstanding balance on the effective date, or

b) the outstanding balance at the time of the prepayment, whichever is less, or even

c) any amount, if prepayment is made pursuant to a mortgage as defined subsequently in 2 a) or at a time specified in 2 b) or c).

If payments are scheduled to be made on a basis that is less frequently than monthly, prepayments will be allowed on the first day of any month during the life of the mortgage.

2) No penalties will be allowed for prepayments made in the following situations:

a) if the mortgage stipulates a rate of credit charge that is more than four percentage points above the relevant reference rate at the time the mortgage was contracted or last renewed.

b) if prepayment is made on a day (or seven days prior) where any condition or term of the mortgage agreement could be varied.

c) if prepayment is made on any fifth anniversary of the effective date of a mortgage.

3) When a prepayment is made in accordance with the conditions set out in 1) above and in situations or at times other than those specified in 2) a) b) or c), the lender is allowed to charge a penalty as compensation for the costs incurred in accepting the prepayment, which penalty is stipulated in a table appended in the regulation to the proposed legislation.

Prepayment penalties - principles.

The framework used for the determination of the maximum prepayment penalties is based upon a consideration of the following factors:

a) the lender's fixed costs of origination of the mortgage,

b) the lender's costs of re-investing the funds prepaid,

c) the "spread" between the credit charge rate specified in the mortgage agreement and the prevailing market rate at the time the prepayment occurs, and

d) the time remaining from the date prepayment occurs to the earlier of either:

i) the date on which the mortgage terminates,
ii) a date which is five years after the effective date of the mortgage transaction,
iii) the next date on which the credit charge rate or any other term or condition of the mortgage transaction may be varied.

Factors a) and b) above are in effect administration costs and lenders will be allowed to charge a maximum of $15 per $1000 prepaid as compensation for these costs. This amount will be reduced linearly over time from the date of origination to the appropriate date as given in d). In addition, it will be reduced by the present value of the gain expected to be obtained by the lender in the event that prepayment occurs at a time when the market rate at the date of prepayment exceeds the rate specified in the mortgage agreement. This approach reflects the facts that costs of origination are usually recovered gradually as benefits from the mortgage loan flow to the lender and that the costs of re-investing a repaid loan would have to be absorbed by the lender as the contract moves toward termination, should a borrower decide not to re-finance the outstanding balance. Also, it appears only fair to the borrower to offset his penalty by any potential gain to the lender that might result from re-investing the prepaid loan at a more profi rate.

Lenders will also be allowed to recover the present value of losses associated with foregone interest arising from prepayments at times when the prevailing market rate is lower than the contract rate. This is factor c) above. The differential between the two rates will be determined by the use of the relevant reference rates,[1] both at the time the mortgage was originated (effective date) and at the time or prepayment. On the date of prepayment, the prevailing "market" rate will be either the current rate being quoted by the lender for similar new loans or a rate obtained by adding the original "spread" between the contract rate and the reference rate on the effective date to the reference rate on the day of prepayment, whichever is less. The difference between the "market" rate determined in the fashion just described and the "contract" rate is the first component used in the calculation of the interest foregone as a result of prepayment. The second component in this calculation is the time remaining under the mortgage transaction to the earlier of the dates specified in d) above. Both components are combined in a mathematical formula described in Appendix 2 to equate the present value of the loss of interest that the lender might reasonably be expected to incur as a result of prepayment.

The interest penalty and the flat fee representing the compensation for the administrative costs are then blended to give the total prepayment penalty allowed in dollars per thousand dollars prepaid, as they appear in the tables to be published.

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(1) See appendix No.1 for a definition of "reference" rate.

Penalty tables - format

As just said, there are two distinct charges which make up the prepayment penalty, namely the interest differential between the current and contract rate and the administration charge. The total charge is the algebraic sum of these two calculations with an upper limit equivalent to nine months of interest, calculated at the contract rate, and a lower limit of zero.

The tables cover situations where the time left under the mortgage transaction ranges from zero to sixty months. They also distinguish for all possible number of years left in the amortization period up to forty years.

Rates used in the calculations are effective annual compounding rates under the assumption that payments are made on a monthly basis. The range of possible contract and current rates go from seven to sixteen percent in one quarter of one percent increments.

For each current rate the tables cover a contract rate ranging from one-quarter of one percent lower, at which the penalty is zero, to an upper limit dependant on the number of months remaining to the end of the mortgage contract. These upper limits are:

- 8% higher than current rate for 1 to 12 monthly payments left to term of contract
- 7% higher for 13 to 24 payments to term
- 6% higher for 25 to 36 payments to term
- 5% higher for 37 to 48 payments to term
- 4% higher for 49 to 60 payments to term

The overall contract rate limit is 17½% and the differentials provided are more than sufficient to cover 99.5% of probabilities that a wide rate differential occurs, on the basis of historical variations in mortgage rates over five year and shorter periods.

For illustration, the mathematical assumptions used in calculating the values appearing in the penalty tables are explained in Appendix 2A. A sample table is given in Appendix 2B along with the detailed procedure as to how to find the appropriate penalty value for a given prepayment situation.

Advantages to borrowers

With regard to the protection of borrowers, the proposed system offers some distinct advantages over that which was originally provided in Bill C-16. First, the system is equitable to all borrowers and does not require that borrowers who prepay be subsidized by those who do not. Such subsidization arises out of the fixed penalty provision currently found in the NHA and Interest Act. As was indicated earlier, the lender is not protected against major declines in interest rates by a fixed three months interest penalty. Consequently, to offset the uncertainty to which he remains exposed, he will raise the general level of lending rates. These higher rates will be paid by all borrowers, whether or not they prepay. Such uncertainty does not exist under the proposed system and, therefore, no general rate increase and no subsidization are likely to result.

Second, the proposed system places no restriction on the time of prepayment and strictly defines the allowable penalties. Thus there is a significant improvement in prepayment rights and protection for borrowers in comparison with the present situation.

Third, while the penalty structure proposed would provide for relatively large penalties if interest rates happened to drop dramatically, realistic estimates relating to historical interest rate fluctuations indicate that the typical prepayment penalties paid under the proposed system could easily be equal to or less than those allowed originally in Bill C-16 or under the N.H.A.[1] Further, judging from past experience, the penalties under the proposed system would fall short of most, and far short of some penalties which are currently charged by lenders on prepayments made during the unregulated period; i.e., the first three years of the contract.

Finally, the four percent upper limit above the reference rate as a condition to permit the charging of a penalty will be beneficial to borrowers in that most "junior" mortgages (second, third, etc.) and high rate first mortgages will become prepayable penalty-free. Junior mortgages were originally designed to supplement first mortgage financing when the major lending institutions were restricted to loans of no more than seventy-five percent of the value of a property. With the advent of insured high-ratio mortgage loans, junior mortgages have become primarily a means of securing large consumer loans and their role in home ownership has reduced substantially. For this reason, they should be treated as consumer loans and admissible to liberal prepayment rights without penalty. In the light of current practices, this will remove a major area of abuses.

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(1) See Appendix no. 3.

Given the above, the proposed system appears to enhance significantly the position of the borrower while at the same time meeting the concerns of the mortgage lenders in order to ensure an efficient market.

## Appendix No. 1

### Reference rates for the calculation of mortgage prepayment penalties

The proposed mortgage prepayment penalty system requires that reference rates be provided for the purpose of establishing the appropriate prevailing market rate at any point in time. The reference rates will apply in the determination of prepayment penalties and will serve as the "index" for variable rate mortgages.

These rates have to reflect closely the costs of funds which lenders use for one, two, three, four and five year term mortgages. At the present time, statistical series being published by either Statistics Canada, C.M.H.C. or the Bank of Canada cover only partially these various terms. To overcome this situation, it is our intention to compile rate series weekly and to publish in the Canada Gazette on a bi-weekly basis a complete set of series based on rates offered on Trust Companies' Guaranteed Investment Certificates and Loan Companies Debentures for terms ranging from one to five years. These rates accurately reflect the mortgage lenders costs of funds at any given point in time.

The appropriate "reference" rate for any given day in a week would then be the rate corresponding to the same term that was published at the beginning of the week.

To facilitate access to these rates, they will be released weekly by the Department to all major newspapers that wishes to carry them, in addition to their publication in the Canada Gazette and other government publications as may be appropriate. Such widespread distribution should ensure that the reference rates were readily and conveniently available to all lenders and borrowers.

In situations where a borrower wishes to prepay his mortgage loan, the lender will then add to the current reference rate the original spread between the contract rate and the reference rate on the effective date of the contract and compare the resulting rate with his prevailing rate for a similar loan at the time of the prepayment. The lowest of these last two rates will then be the current rate for the purpose of finding the appropriate value in the mortgage prepayment penalty tables.

## Appendix No. 2

## Mortgage prepayment penalty tables

### A. Construction of the tables

Penalty values computed in the table are made out of the algebraic sums of two components which will be described in turn:

1. the interest differential
2. the administrative charge

### 1. The interest differential

Essentially, this component represents the present value at the current interest rate of the differential between the interest payments generated by the two rates (contractual and current) under the assumption that the original monthly payment continues until the term of the mortgage contract (maximum five years).

It must be emphasized that a penalty results from the interest differential only when the current rate is lower than the contract rate, otherwise the differential really represents a gain to the lender.

In the mathematical approach developed to compute the tables, the following assumptions were made:

- the values generated must represent the present value of the flow of interest foregone when the lender re-invests immediately the prepaid amount along with the penalty for the time period remaining to the term of the contract.

- the discount rate used in calculating the present value is the current rate

- the maximum time left to term is sixty months

- the mortgage loan is of the amortized type with equal blended payments of capital and interest made monthly. The maximum amortization period is forty years.

- rates used in the calculation are effective annual compounding rates with interest compounded on a monthly basis as given by the formula:

$$r = (1 + i)^{12} - 1$$

where, r : effective annual rate (decimals)
i : monthly rate (decimals)

- Finally, the values have to be expressed in dollars per thousand dollars prepaid.

The calculation of the interest differential generated by the two rates (contract and current) follows the following steps:

1. The monthly payment required to offset $1000 over the remaining amortization period (from 0 to 40 years in monthly increments) is calculated, using the contract rate (effective annual).

2. This payment is then used in generating a sequence of decreasing monthly interest components for both the current and contract rates. The payment-by-payment difference in interest between the two rates is obtained and the present value of this interest difference is calculated using the current rate as the discount factor.

3. For each possible term remaining (0 to 60 months), the total present value of the monthly interest differentials is tabulated by suming up the monthly values.

An example will clarify the procedure followed. Supposing,

- a 10% effective annual current rate
- a 12% effective annual contract rate
- 24 years and 1 month remaining in the amortization period
- 49 months remaining to term (4 years and 1 month)

then a $1000 loan amortized over 25 years at 12% would require equal monthly payments of $10.34. Using this payment, the calculations summarized in the following table are made.

| (1) Months to term | (2) Interest Component at 12% | (3) Interest Component at 10% | (4) Interest Differential | (5) Present value of i differential | (6) Cumulative total of present values |
|---|---|---|---|---|---|
| 1 | $9.49 | $7.97 | $1.52 | $1.50 | $1.50 |
| 2 | 9.48 | 7.96 | 1.52 | 1.50 | 3.00 |
| 3 | 9.47 | 7.94 | 1.53 | 1.50 | 4.50 |
| 4 | 9.46 | 7.92 | 1.54 | 1.49 | 5.99 |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| 25 | 9.27 | 7.48 | 1.79 | 1.47 | 37.18 |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| 49 | 9.00 | 6.88 | 2.12 | 1.44 | $72.10 |

For each month until the term of the contract (49 in this example) the difference between the interest component in the payment generated by the two rates, contract (column 2) and current (column 3) is calculated and given in column 4. The present value of the interest differential is computed for each month (column 5) and the cumulative total of the present values of monthly interest differentials is done (column 6).

In this case, a two percent drop in rates after only eleven months elapsed in a five year mortgage contract would necessitate a penalty of $72 per $1000 prepaid to cover the expected interest loss for the lender.

## 2. The administrative charge

This component of the total penalty is based on a flat allowance of $15 per $1000 prepaid at the start of the mortgage contract, linearly decreasing to 0 over a five year period. As in the case of the interest differential component however, the precise charge is dependant of the time left to term rather than the time elapsed from the start of the contract. Therefore, the charge is more appropriately defined as being $0.25 per $1000 prepaid per month remaining to term. For 13 months left to term this component would then be $3.25 per $1000 and for 49 months remaining it would be $12.25.

Both components, interest differential and administrative charge, are summed algebraically to yield the penalty values as they appear in the table. Thus, when the current rate exceeds the contract rate, the administrative charge is reduced by the present value of the gain to the lender resulting from re-investment at the higher current rate. For this reason, the total penalties reproduced in the table fall to zero whenever the current rate exceeds the contract rate by more than one quarter of one percent.

## 3. Mathematical expression of the penalty

Using the assumption stated earlier in this note, the "interest differential" component of the penalty applicable in a given situation can be expressed as follows:

$$P=\sum_{t=1}^{k}\left(\left\{\left[(1+i)^{1/12}-1\right]\cdot\frac{1-(1+i)^{-n+\frac{t-1}{12}}}{1-(1+i)^{-n}}-\left[(1+r)^{\frac{t-1}{12}}-R\,\frac{(1+r)^{\frac{t-1}{12}}-1}{(1+r)^{1/12}-1}\right]\cdot\left[(1+r)^{1/12}-1\right]\right\}(1+r)^{-t/12}\right)$$

(A) (B) (C) (D) (E) (F)

where, P = penalty (as a decimal factor for $1.00 prepaid)
k = time left to term (in months, maximum 60)
i = contract rate (decimal, effective annual compounding on a monthly basis where a month equals 1/12 year).
r = current rate (decimal, effective annual compounding monthly).
n = time left in amortization period (in years, maximum 40).
t = time unit in months, where the first month following the prepayment is month no. 1 and subsequent months in the remainder of the term are numbered 2, 3.....k.
R = monthly payment as a decimal fraction (for a mortgage of $1.00).

where R is defined as,

$$R = \frac{(1+i)^{1/2} - 1}{1 - (1+i)^{-n}}$$

The formula can be further explained by identifying each of its main components.

- (C) is the mortgage outstanding or amount prepaid (if they differ), expressed as $1.00 in the formula at time t = 1 and as $1000. in the table.

- (B) is the monthly interest factor corresponding to the effective compounding annual contract rate. The combination (B).(C) gives the interest component (of the payment) for month t.

- (D) is the hypothetical mortgage or amount, consisting of the mortgage outstanding (or amount prepaid if they differ) plus the unknown penalty which would be required in order to yield the same blended monthly payment over the same remaining amortization period under the current rate (which is assumed to be lower than the contract rate).

- (E) is the monthly interest factor corresponding to the effective compounding annual current rate. The combination (D) . (E) yields the interest component (of the payment), at month t, for the hypothetical mortgage as described in the preceeding paragraph.

- the difference between [(B) . (C)] and [(D) . (E)] is the loss of interest for month t.

- (F) is the discounting factor, at month t, applied to the interest differential to obtain the present value of the loss; this factor is based on the current rate.

- (A) is the summation of all the present values of losses of interest for the various months t, from 1 to k in the remainder of the term.

Finally, the "administrative charge" component in the total penalty is given by:

$$P_k = c.k$$

where,

- $P_k$: administrative penalty for a given time left to term, that is k months
- c: a constant basic penalty of \$0.00025 per \$1.00 prepaid (or \$0.25 per \$1000) per month left to term
- k: number of months left to term

This "administrative" penalty is added algebraically to the "interest" penalty to yield the total penalty. This entails that when the "interest" penalty is negative (i.e., a potential gain to the lender resulting from a current rate higher than the contract rate) the "administrative" penalty is offset until the total reaches zero. At the other end of the range, the total penalty is limited to an amount equivalent to nine months of interest, at the contract rate, on the amount prepaid.

## 4. The format of the penalty table

The table covers situations where the time left to term (i.e., in the mortgage contract) could be any number of months, from 0 to 60 months.

It also distinguishes all possible payment flows for any given rate covered in the table, corresponding to any number of years left in the amortization period, from 0 to 40 years.

The table covers a 7% to 16% range for current rates and $6\frac{3}{4}$ to $17\frac{1}{2}$% range for contract rates, in both cases in $\frac{1}{4}$% increments.

For each current rate, the table covers a range of contract rates going from $\frac{1}{2}$% lower, at which the penalty falls to zero, to an upper limit which is dependant on the number of months remaining to the end of the mortgage contract (i.e., dependant on the time elapsed since the contract was made with a five year horizon). For each current rate, the upper limits on the range of contract rates covered are:

- 8% higher than the current rate when there are from 1 to 12 months left to term
- 7% higher for 13 to 24 months to term
- 6% higher for 25 to 36 months to term
- 5% higher for 37 to 48 months to term
- 4% higher for 49 to 60 months to term

These intervals are also limited by an overall contract rate limit of $17\frac{1}{2}$%. The ranges provided are more than sufficient to cover 99.5% of probabilities of actual contract-current rate differentials, based on a statistical analysis of historical variations in mortgage rates for five-year and shorter periods.

B. How to use the penalty tables

The tables are assembled in current rate order, each book covering a one percent range (e.g., 8%, 8.25%, 8.50%, 8.75%) so that lenders will have to use only one book at any point in time. Current rates increase by one quarter of one percent.

For a given current rate, pages are assembled following contract rates in increasing order, by one quarter of one percent increments and for a range of one quarter of one percent lower to 4, 5, 6, 7 or 8% higher, depending on the number of months remaining to term.

For each individual current-contract combination, there are five pages, one for each year remaining to term (maximum 60 months). In a given page, column headings indicate the exact number of months remaining to term while the lines refer to the number of complete years left in the amortization period (maximum 40 years).

The steps to obtain a prepayment penalty value are the following:

1. The lender first has to assess the relevant current rate in the manner described earlier in the paper, as well as the number of years left in the amortization period and the number of months left to term or the next penalty-free date, as the case may be (also explained in the main of the text).

2. With this information, he locates the appropriate current-contract rates combination (a five page set) and selects the appropriate page on the basis of the number of months left till the next term (or penalty-free date). The appropriate column is the one corresponding to exactly the number of months remaining to term. Finally, the relevant value is on the row corresponding to the number of complete years left in the amortization period.

Using the sample tables appended and supposing a prepayment situation where,

a) the current rate is 8%
b) the contract rate is 9.25%
c) 2 years and 8 months left to term, that is 32 months remaining to term
d) 27 years and 8 months left in the amortization period

then the appropriate penalty value would be located on the page indicating 25 to 36 months left to term, under the column 32 months (for 2 years and 8 months) and in the row corresponding to the number of complete years in the amortization period that is 27 in our example. The value $38.36 is the maximum penalty that the lender could charge per $1000 prepaid in this example.

Finally, it should be noted that zero values appearing at the bottom of many pages refer to "not applicable" as they relate to impossible situations where the time left to term would be longer than the remaining time in the amortization period.

At the present time, the Department is working on a revision of the general format of presentation of the table in order to reduce its size and improve its readability. Some of the avenues for improvement under consideration are the following:

(1) - Adopting a tolerance of $1.00 rather than $0.01 with any fraction of a dollar rounded up or down to the closest dollar figure. Dropping the cents figures from the table could cut its total size by approximately half while allowing computerized institutions some flexibility in adopting an algorithm of their own rather than using a manual. However, rounding up to the next dollar entails a loss of accuracy and in approximately half the cases borrowers facing a penalty will pay on average an extra $0.25 per $1000. prepaid; for a $100,000 mortgage this would mean an extra $25.00.

(2) - Covering the number of years left in the amortization period by annual increments from 1 to 10 years but only by five year leaps from 10 to 40 years. When the number of years left in the amortization period exceeds ten years, the year to year differential reduces substantially and very little accuracy would be lost one way or the other by adopting one penalty figure for a five year period, especially if the tolerance is moved from $0.01 to $1.00. This would also contribute to a substantial reduction of the volume of the table as well as allow some flexibility for computer adaptation.

(3) - Finally, in situations where the range of rates covered entails the maximum penalty for a large range of terms and amortization, it may be desirable to summarize somewhat the information rather than printing the same figure over entire pages, as in the present standard printing format.

Decisions on these considerations are not firm yet as they have to be evaluated under many aspects: accuracy, readability, flexibility of computer programing, etc. The final format however should be adopted within the next few weeks.

MORTGAGE PREPAYMENT PENALTY TABLES
PER $1000

| | |
|---|---|
| CURRENT RATE | 8.00 |
| CONTRACT RATE | 9.25 |
| Months to term | 0 TO 12 |

CURRENT RATE - 8.00 - CURRENT RATE

MONTHS REMAINING to term

| YEARS LEFT IN AM PERIOD | 1 MON | 2 MONS | 3 MONS | 4 MONS | 5 MONS | 6 MONS | 7 MONS | 8 MONS | 9 MONS | 10 MONS | 11 MONS | 12 MONS | YEARS LEFT IN AM PERIOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 1.21 | 2.42 | 3.63 | 4.84 | 6.04 | 7.25 | 8.46 | 9.67 | 10.88 | 12.08 | 13.29 | 14.50 | 39 |
| 38 | 1.21 | 2.42 | 3.63 | 4.84 | 6.04 | 7.25 | 8.46 | 9.67 | 10.88 | 12.08 | 13.29 | 14.50 | 38 |
| 37 | 1.21 | 2.42 | 3.63 | 4.84 | 6.04 | 7.25 | 8.46 | 9.67 | 10.88 | 12.08 | 13.29 | 14.50 | 37 |
| 36 | 1.21 | 2.42 | 3.63 | 4.84 | 6.04 | 7.25 | 8.46 | 9.67 | 10.87 | 12.08 | 13.29 | 14.49 | 36 |
| 35 | 1.21 | 2.42 | 3.63 | 4.84 | 6.04 | 7.25 | 8.46 | 9.67 | 10.87 | 12.08 | 13.29 | 14.49 | 35 |
| 34 | 1.21 | 2.42 | 3.63 | 4.84 | 6.04 | 7.25 | 8.46 | 9.67 | 10.87 | 12.08 | 13.28 | 14.49 | 34 |
| 33 | 1.21 | 2.42 | 3.63 | 4.84 | 6.04 | 7.25 | 8.46 | 9.66 | 10.87 | 12.08 | 13.28 | 14.49 | 33 |
| 32 | 1.21 | 2.42 | 3.63 | 4.84 | 6.04 | 7.25 | 8.46 | 9.66 | 10.87 | 12.08 | 13.28 | 14.49 | 32 |
| 31 | 1.21 | 2.42 | 3.63 | 4.83 | 6.04 | 7.25 | 8.46 | 9.66 | 10.87 | 12.07 | 13.28 | 14.48 | 31 |
| 30 | 1.21 | 2.42 | 3.63 | 4.83 | 6.04 | 7.25 | 8.46 | 9.66 | 10.87 | 12.07 | 13.28 | 14.48 | 30 |
| 29 | 1.21 | 2.42 | 3.63 | 4.83 | 6.04 | 7.25 | 8.45 | 9.66 | 10.86 | 12.07 | 13.27 | 14.48 | 29 |
| 28 | 1.21 | 2.42 | 3.63 | 4.83 | 6.04 | 7.25 | 8.45 | 9.66 | 10.86 | 12.07 | 13.27 | 14.47 | 28 |
| 27 | 1.21 | 2.42 | 3.63 | 4.83 | 6.04 | 7.25 | 8.45 | 9.66 | 10.86 | 12.06 | 13.27 | 14.47 | 27 |
| 26 | 1.21 | 2.42 | 3.63 | 4.83 | 6.04 | 7.25 | 8.45 | 9.65 | 10.86 | 12.06 | 13.26 | 14.47 | 26 |
| 25 | 1.21 | 2.42 | 3.63 | 4.83 | 6.04 | 7.24 | 8.45 | 9.65 | 10.86 | 12.06 | 13.26 | 14.46 | 25 |
| 24 | 1.21 | 2.42 | 3.63 | 4.83 | 6.04 | 7.24 | 8.45 | 9.65 | 10.85 | 12.05 | 13.26 | 14.46 | 24 |
| 23 | 1.21 | 2.42 | 3.63 | 4.83 | 6.04 | 7.24 | 8.44 | 9.65 | 10.85 | 12.05 | 13.25 | 14.45 | 23 |
| 22 | 1.21 | 2.42 | 3.62 | 4.83 | 6.04 | 7.24 | 8.44 | 9.64 | 10.85 | 12.05 | 13.24 | 14.44 | 22 |
| 21 | 1.21 | 2.42 | 3.62 | 4.83 | 6.03 | 7.24 | 8.44 | 9.64 | 10.84 | 12.04 | 13.24 | 14.44 | 21 |
| 20 | 1.21 | 2.42 | 3.62 | 4.83 | 6.03 | 7.24 | 8.44 | 9.64 | 10.84 | 12.03 | 13.23 | 14.43 | 20 |
| 19 | 1.21 | 2.42 | 3.62 | 4.83 | 6.03 | 7.23 | 8.43 | 9.63 | 10.83 | 12.03 | 13.22 | 14.42 | 19 |
| 18 | 1.21 | 2.42 | 3.62 | 4.83 | 6.03 | 7.23 | 8.43 | 9.63 | 10.82 | 12.02 | 13.21 | 14.41 | 18 |
| 17 | 1.21 | 2.42 | 3.62 | 4.83 | 6.03 | 7.23 | 8.43 | 9.62 | 10.82 | 12.01 | 13.20 | 14.39 | 17 |
| 16 | 1.21 | 2.42 | 3.62 | 4.82 | 6.03 | 7.22 | 8.42 | 9.62 | 10.81 | 12.00 | 13.19 | 14.38 | 16 |
| 15 | 1.21 | 2.42 | 3.62 | 4.82 | 6.02 | 7.22 | 8.42 | 9.61 | 10.80 | 11.99 | 13.18 | 14.36 | 15 |
| 14 | 1.21 | 2.42 | 3.62 | 4.82 | 6.02 | 7.22 | 8.41 | 9.60 | 10.79 | 11.98 | 13.16 | 14.34 | 14 |
| 13 | 1.21 | 2.42 | 3.62 | 4.82 | 6.02 | 7.21 | 8.40 | 9.59 | 10.78 | 11.96 | 13.14 | 14.32 | 13 |
| 12 | 1.21 | 2.42 | 3.62 | 4.82 | 6.01 | 7.20 | 8.39 | 9.58 | 10.76 | 11.94 | 13.12 | 14.30 | 12 |
| 11 | 1.21 | 2.41 | 3.62 | 4.81 | 6.01 | 7.20 | 8.38 | 9.57 | 10.75 | 11.92 | 13.10 | 14.27 | 11 |
| 10 | 1.21 | 2.41 | 3.61 | 4.81 | 6.00 | 7.19 | 8.37 | 9.55 | 10.72 | 11.90 | 13.06 | 14.23 | 10 |
| 9 | 1.21 | 2.41 | 3.61 | 4.80 | 5.99 | 7.18 | 8.35 | 9.53 | 10.70 | 11.86 | 13.03 | 14.18 | 9 |
| 8 | 1.21 | 2.41 | 3.61 | 4.80 | 5.98 | 7.16 | 8.34 | 9.50 | 10.67 | 11.83 | 12.98 | 14.13 | 8 |
| 7 | 1.21 | 2.41 | 3.60 | 4.79 | 5.97 | 7.14 | 8.31 | 9.47 | 10.63 | 11.78 | 12.92 | 14.06 | 7 |
| 6 | 1.21 | 2.41 | 3.60 | 4.78 | 5.95 | 7.12 | 8.28 | 9.43 | 10.57 | 11.71 | 12.84 | 13.97 | 6 |
| 5 | 1.21 | 2.41 | 3.59 | 4.77 | 5.93 | 7.09 | 8.23 | 9.37 | 10.50 | 11.62 | 12.74 | 13.85 | 5 |
| 4 | 1.21 | 2.40 | 3.59 | 4.75 | 5.90 | 7.04 | 8.17 | 9.29 | 10.40 | 11.50 | 12.59 | 13.67 | 4 |
| 3 | 1.21 | 2.40 | 3.56 | 4.71 | 5.85 | 6.96 | 8.07 | 9.16 | 10.24 | 11.31 | 12.36 | 13.41 | 3 |
| 2 | 1.21 | 2.39 | 3.53 | 4.65 | 5.75 | 6.83 | 7.89 | 8.93 | 9.96 | 10.98 | 11.98 | 12.98 | 2 |
| 1 | 1.21 | 2.35 | 3.45 | 4.50 | 5.52 | 6.51 | 7.48 | 8.43 | 9.36 | 10.29 | 11.20 | 12.10 | 1 |
| 0 | 1.21 | 1.94 | 2.68 | 3.42 | 4.17 | 4.91 | 5.66 | 6.42 | 7.17 | 7.93 | 8.70 | 9.46 | 0 |

# MORTGAGE PREPAYMENT PENALTY TABLES
PER $1000

| | |
|---|---|
| CURRENT RATE | 8.00 |
| CONTRACT RATE | 9.25 |
| months to TERM | 13 to 24 |

CURRENT RATE - 8.00 - CURRENT RATE

MONTHS REMAINING to term

| YEARS LEFT IN AM PERIOD | 13 MON | 14 MONS | 15 MONS | 16 MONS | 17 MONS | 18 MONS | 19 MONS | 20 MONS | 21 MONS | 22 MONS | 23 MONS | 24 MONS | YEARS LEFT IN AM PERIOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 15.70 | 16.91 | 18.12 | 19.32 | 20.53 | 21.74 | 22.94 | 24.15 | 25.35 | 26.56 | 27.76 | 28.97 | 39 |
| 38 | 15.70 | 16.91 | 18.11 | 19.32 | 20.53 | 21.73 | 22.94 | 24.14 | 25.35 | 26.55 | 27.76 | 28.96 | 38 |
| 37 | 15.70 | 16.91 | 18.11 | 19.32 | 20.52 | 21.73 | 22.93 | 24.14 | 25.34 | 26.55 | 27.75 | 28.95 | 37 |
| 36 | 15.70 | 16.90 | 18.11 | 19.31 | 20.52 | 21.72 | 22.93 | 24.13 | 25.34 | 26.54 | 27.74 | 28.95 | 36 |
| 35 | 15.70 | 16.90 | 18.11 | 19.31 | 20.52 | 21.72 | 22.92 | 24.13 | 25.33 | 26.53 | 27.74 | 28.94 | 35 |
| 34 | 15.69 | 16.90 | 18.10 | 19.31 | 20.51 | 21.72 | 22.92 | 24.12 | 25.32 | 26.53 | 27.73 | 28.93 | 34 |
| 33 | 15.69 | 16.90 | 18.10 | 19.30 | 20.51 | 21.71 | 22.91 | 24.12 | 25.32 | 26.52 | 27.72 | 28.92 | 33 |
| 32 | 15.69 | 16.89 | 18.10 | 19.30 | 20.50 | 21.70 | 22.91 | 24.11 | 25.31 | 26.51 | 27.71 | 28.91 | 32 |
| 31 | 15.69 | 16.89 | 18.09 | 19.29 | 20.50 | 21.70 | 22.90 | 24.10 | 25.30 | 26.50 | 27.70 | 28.90 | 31 |
| 30 | 15.68 | 16.88 | 18.09 | 19.29 | 20.49 | 21.69 | 22.89 | 24.09 | 25.29 | 26.49 | 27.69 | 28.89 | 30 |
| 29 | 15.68 | 16.88 | 18.08 | 19.28 | 20.48 | 21.68 | 22.88 | 24.08 | 25.28 | 26.48 | 27.68 | 28.88 | 29 |
| 28 | 15.67 | 16.87 | 18.07 | 19.27 | 20.47 | 21.67 | 22.87 | 24.07 | 25.27 | 26.47 | 27.66 | 28.86 | 28 |
| 27 | 15.67 | 16.87 | 18.07 | 19.27 | 20.47 | 21.66 | 22.86 | 24.06 | 25.26 | 26.45 | 27.65 | 28.85 | 27 |
| 26 | 15.66 | 16.86 | 18.06 | 19.26 | 20.46 | 21.65 | 22.85 | 24.05 | 25.24 | 26.44 | 27.63 | 28.83 | 26 |
| 25 | 15.65 | 16.85 | 18.05 | 19.25 | 20.45 | 21.64 | 22.84 | 24.03 | 25.23 | 26.42 | 27.61 | 28.81 | 25 |
| 24 | 15.65 | 16.85 | 18.04 | 19.24 | 20.43 | 21.63 | 22.82 | 24.02 | 25.21 | 26.40 | 27.59 | 28.78 | 24 |
| 23 | 15.64 | 16.84 | 18.03 | 19.23 | 20.42 | 21.61 | 22.81 | 24.00 | 25.19 | 26.38 | 27.57 | 28.76 | 23 |
| 22 | 15.63 | 16.83 | 18.02 | 19.21 | 20.41 | 21.60 | 22.79 | 23.98 | 25.17 | 26.36 | 27.54 | 28.73 | 22 |
| 21 | 15.62 | 16.81 | 18.01 | 19.20 | 20.39 | 21.58 | 22.77 | 23.96 | 25.14 | 26.33 | 27.51 | 28.70 | 21 |
| 20 | 15.61 | 16.80 | 17.99 | 19.18 | 20.37 | 21.56 | 22.74 | 23.93 | 25.11 | 26.30 | 27.48 | 28.66 | 20 |
| 19 | 15.60 | 16.79 | 17.98 | 19.16 | 20.35 | 21.53 | 22.72 | 23.90 | 25.08 | 26.26 | 27.44 | 28.62 | 19 |
| 18 | 15.58 | 16.77 | 17.96 | 19.14 | 20.32 | 21.51 | 22.69 | 23.87 | 25.05 | 26.22 | 27.40 | 28.58 | 18 |
| 17 | 15.57 | 16.75 | 17.93 | 19.12 | 20.30 | 21.48 | 22.65 | 23.83 | 25.01 | 26.18 | 27.35 | 28.52 | 17 |
| 16 | 15.55 | 16.73 | 17.91 | 19.09 | 20.27 | 21.44 | 22.61 | 23.79 | 24.96 | 26.13 | 27.30 | 28.46 | 16 |
| 15 | 15.52 | 16.70 | 17.88 | 19.06 | 20.23 | 21.40 | 22.57 | 23.74 | 24.90 | 26.07 | 27.23 | 28.40 | 15 |
| 14 | 15.50 | 16.67 | 17.85 | 19.02 | 20.19 | 21.35 | 22.52 | 23.68 | 24.84 | 26.00 | 27.16 | 28.32 | 14 |
| 13 | 15.47 | 16.64 | 17.81 | 18.97 | 20.14 | 21.30 | 22.46 | 23.61 | 24.77 | 25.92 | 27.07 | 28.22 | 13 |
| 12 | 15.43 | 16.60 | 17.76 | 18.92 | 20.08 | 21.23 | 22.39 | 23.54 | 24.68 | 25.83 | 26.97 | 28.12 | 12 |
| 11 | 15.39 | 16.55 | 17.70 | 18.86 | 20.01 | 21.15 | 22.30 | 23.44 | 24.58 | 25.72 | 26.85 | 27.99 | 11 |
| 10 | 15.34 | 16.49 | 17.64 | 18.78 | 19.92 | 21.06 | 22.20 | 23.33 | 24.46 | 25.59 | 26.71 | 27.83 | 10 |
| 9 | 15.27 | 16.42 | 17.55 | 18.69 | 19.82 | 20.95 | 22.07 | 23.19 | 24.31 | 25.42 | 26.54 | 27.65 | 9 |
| 8 | 15.19 | 16.32 | 17.45 | 18.57 | 19.69 | 20.80 | 21.91 | 23.02 | 24.12 | 25.22 | 26.32 | 27.41 | 8 |
| 7 | 15.09 | 16.20 | 17.31 | 18.42 | 19.52 | 20.62 | 21.71 | 22.80 | 23.88 | 24.97 | 26.04 | 27.12 | 7 |
| 6 | 14.96 | 16.06 | 17.13 | 18.22 | 19.30 | 20.37 | 21.44 | 22.51 | 23.57 | 24.63 | 25.69 | 26.74 | 6 |
| 5 | 14.79 | 15.82 | 16.88 | 17.94 | 18.99 | 20.04 | 21.08 | 22.12 | 23.15 | 24.18 | 25.20 | 26.23 | 5 |
| 4 | 14.45 | 15.49 | 16.51 | 17.53 | 18.54 | 19.55 | 20.55 | 21.55 | 22.54 | 23.53 | 24.52 | 25.50 | 4 |
| 3 | 13.96 | 14.94 | 15.91 | 16.87 | 17.83 | 18.78 | 19.73 | 20.67 | 21.61 | 22.54 | 23.48 | 24.41 | 3 |
| 2 | 12.99 | 13.88 | 14.76 | 15.64 | 16.52 | 17.39 | 18.25 | 19.12 | 19.99 | 20.85 | 21.71 | 22.57 | 2 |
| 1 | 10.23 | 11.00 | 11.78 | 12.56 | 13.34 | 14.12 | 14.91 | 15.70 | 16.50 | 17.29 | 18.09 | 18.90 | 1 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |

MORTGAGE PREPAYMENT PENALTY TABLES
PER $1000

| | |
|---|---|
| CURRENT RATE | 8.00 |
| CONTRACT RATE | 9.25 |
| months to TERM | 25 to 36 |

CURRENT RATE - 8.00 - CURRENT RATE

MONTHS REMAINING to term

| YEARS LEFT IN AM PERIOD | 25 MON | 26 MONS | 27 MONS | 28 MONS | 29 MONS | 30 MONS | 31 MONS | 32 MONS | 33 MONS | 34 MONS | 35 MONS | 36 MONS | YEARS LEFT IN AM PERIOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 30.16 | 31.37 | 32.57 | 33.78 | 34.98 | 36.19 | 37.39 | 38.59 | 39.79 | 41.00 | 42.20 | 43.40 | 39 |
| 38 | 30.16 | 31.36 | 32.57 | 33.77 | 34.97 | 36.17 | 37.38 | 38.58 | 39.78 | 40.98 | 42.19 | 43.39 | 38 |
| 37 | 30.15 | 31.35 | 32.56 | 33.76 | 34.96 | 36.16 | 37.37 | 38.57 | 39.77 | 40.97 | 42.17 | 43.38 | 37 |
| 36 | 30.14 | 31.35 | 32.55 | 33.75 | 34.95 | 36.15 | 37.35 | 38.56 | 39.76 | 40.96 | 42.16 | 43.36 | 36 |
| 35 | 30.13 | 31.34 | 32.54 | 33.74 | 34.94 | 36.14 | 37.34 | 38.54 | 39.74 | 40.94 | 42.14 | 43.34 | 35 |
| 34 | 30.12 | 31.33 | 32.53 | 33.73 | 34.93 | 36.13 | 37.33 | 38.53 | 39.73 | 40.93 | 42.12 | 43.32 | 34 |
| 33 | 30.11 | 31.31 | 32.51 | 33.71 | 34.91 | 36.11 | 37.31 | 38.51 | 39.71 | 40.91 | 42.11 | 43.30 | 33 |
| 32 | 30.10 | 31.30 | 32.50 | 33.70 | 34.90 | 36.10 | 37.29 | 38.49 | 39.69 | 40.89 | 42.08 | 43.28 | 32 |
| 31 | 30.09 | 31.29 | 32.49 | 33.68 | 34.88 | 36.08 | 37.27 | 38.47 | 39.67 | 40.86 | 42.06 | 43.25 | 31 |
| 30 | 30.07 | 31.27 | 32.47 | 33.67 | 34.86 | 36.06 | 37.25 | 38.45 | 39.64 | 40.84 | 42.03 | 43.23 | 30 |
| 29 | 30.06 | 31.25 | 32.45 | 33.65 | 34.84 | 36.03 | 37.23 | 38.42 | 39.62 | 40.81 | 42.00 | 43.20 | 29 |
| 28 | 30.04 | 31.24 | 32.43 | 33.62 | 34.82 | 36.01 | 37.20 | 38.40 | 39.59 | 40.78 | 41.97 | 43.16 | 28 |
| 27 | 30.02 | 31.21 | 32.41 | 33.60 | 34.79 | 35.98 | 37.17 | 38.36 | 39.56 | 40.75 | 41.94 | 43.12 | 27 |
| 26 | 30.00 | 31.19 | 32.38 | 33.57 | 34.76 | 35.95 | 37.14 | 38.33 | 39.52 | 40.71 | 41.90 | 43.08 | 26 |
| 25 | 29.97 | 31.16 | 32.35 | 33.54 | 34.73 | 35.92 | 37.11 | 38.29 | 39.48 | 40.67 | 41.85 | 43.04 | 25 |
| 24 | 29.93 | 31.13 | 32.32 | 33.51 | 34.69 | 35.88 | 37.07 | 38.25 | 39.43 | 40.62 | 41.80 | 42.98 | 24 |
| 23 | 29.92 | 31.10 | 32.29 | 33.47 | 34.66 | 35.84 | 37.02 | 38.20 | 39.38 | 40.57 | 41.75 | 42.93 | 23 |
| 22 | 29.89 | 31.07 | 32.25 | 33.43 | 34.61 | 35.79 | 36.97 | 38.15 | 39.33 | 40.51 | 41.68 | 42.86 | 22 |
| 21 | 29.84 | 31.02 | 32.20 | 33.38 | 34.56 | 35.74 | 36.91 | 38.09 | 39.27 | 40.44 | 41.61 | 42.79 | 21 |
| 20 | 29.80 | 30.98 | 32.15 | 33.33 | 34.50 | 35.68 | 36.85 | 38.02 | 39.19 | 40.37 | 41.54 | 42.71 | 20 |
| 19 | 29.75 | 30.92 | 32.10 | 33.27 | 34.44 | 35.61 | 36.78 | 37.95 | 39.11 | 40.28 | 41.45 | 42.61 | 19 |
| 18 | 29.69 | 30.86 | 32.03 | 33.20 | 34.37 | 35.53 | 36.70 | 37.86 | 39.02 | 40.19 | 41.35 | 42.51 | 18 |
| 17 | 29.63 | 30.80 | 31.96 | 33.12 | 34.28 | 35.44 | 36.60 | 37.76 | 38.92 | 40.08 | 41.23 | 42.39 | 17 |
| 16 | 29.56 | 30.72 | 31.88 | 33.03 | 34.19 | 35.34 | 36.50 | 37.65 | 38.80 | 39.95 | 41.10 | 42.25 | 16 |
| 15 | 29.47 | 30.63 | 31.78 | 32.93 | 34.08 | 35.23 | 36.38 | 37.52 | 38.67 | 39.81 | 40.95 | 42.10 | 15 |
| 14 | 29.37 | 30.52 | 31.67 | 32.81 | 33.95 | 35.09 | 36.23 | 37.37 | 38.51 | 39.65 | 40.78 | 41.91 | 14 |
| 13 | 29.26 | 30.40 | 31.53 | 32.67 | 33.80 | 34.94 | 36.07 | 37.20 | 38.32 | 39.45 | 40.58 | 41.70 | 13 |
| 12 | 29.12 | 30.25 | 31.38 | 32.50 | 33.63 | 34.75 | 35.87 | 36.99 | 38.11 | 39.23 | 40.34 | 41.45 | 12 |
| 11 | 28.95 | 30.07 | 31.19 | 32.30 | 33.42 | 34.53 | 35.64 | 36.74 | 37.85 | 38.96 | 40.06 | 41.16 | 11 |
| 10 | 28.75 | 29.86 | 30.96 | 32.06 | 33.16 | 34.26 | 35.35 | 36.45 | 37.54 | 38.63 | 39.72 | 40.81 | 10 |
| 9 | 28.51 | 29.60 | 30.68 | 31.77 | 32.85 | 33.93 | 35.01 | 36.09 | 37.16 | 38.23 | 39.31 | 40.38 | 9 |
| 8 | 28.19 | 29.26 | 30.33 | 31.40 | 32.46 | 33.52 | 34.58 | 35.63 | 36.69 | 37.74 | 38.79 | 39.85 | 8 |
| 7 | 27.79 | 28.83 | 29.88 | 30.92 | 31.96 | 32.99 | 34.03 | 35.06 | 36.09 | 37.12 | 38.15 | 39.17 | 7 |
| 6 | 27.24 | 28.26 | 29.27 | 30.28 | 31.29 | 32.30 | 33.30 | 34.30 | 35.30 | 36.30 | 37.30 | 38.30 | 6 |
| 5 | 26.46 | 27.46 | 28.43 | 29.40 | 30.37 | 31.34 | 32.31 | 33.27 | 34.24 | 35.20 | 36.16 | 37.12 | 5 |
| 4 | 25.33 | 26.28 | 27.10 | 28.11 | 29.03 | 29.95 | 30.87 | 31.79 | 32.71 | 33.62 | 34.54 | 35.46 | 4 |
| 3 | 23.44 | 24.30 | 25.16 | 26.02 | 26.89 | 27.75 | 28.61 | 29.48 | 30.35 | 31.21 | 32.08 | 32.95 | 3 |
| 2 | 19.70 | 20.51 | 21.32 | 22.14 | 22.95 | 23.77 | 24.60 | 25.42 | 26.25 | 27.08 | 27.92 | 28.76 | 2 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |

# MORTGAGE PREPAYMENT PENALTY TABLES
## PER $1000

| | |
|---|---|
| CURRENT RATE | 8.00 |
| CONTRACT RATE | 9.25 |
| months to TERM | 37 to 48 |

CURRENT RATE - 8.00 - CURRENT RATE

MONTHS REMAINING to term

| YEARS LEFT IN AM PERIOD | 37 MON | 38 MONS | 39 MONS | 40 MONS | 41 MONS | 42 MONS | 43 MONS | 44 MONS | 45 MONS | 46 MONS | 47 MONS | 48 MONS | YEARS LEFT IN AM PERIOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 44.59 | 45.79 | 46.99 | 48.20 | 49.40 | 50.60 | 51.80 | 53.00 | 54.20 | 55.40 | 56.60 | 57.81 | 39 |
| 38 | 44.58 | 45.78 | 46.98 | 48.18 | 49.39 | 50.58 | 51.78 | 52.98 | 54.18 | 55.38 | 56.58 | 57.78 | 38 |
| 37 | 44.56 | 45.76 | 46.96 | 48.16 | 49.36 | 50.56 | 51.76 | 52.96 | 54.16 | 55.36 | 56.56 | 57.76 | 37 |
| 36 | 44.54 | 45.74 | 46.94 | 48.14 | 49.34 | 50.54 | 51.74 | 52.94 | 54.13 | 55.33 | 56.53 | 57.73 | 36 |
| 35 | 44.52 | 45.72 | 46.92 | 48.12 | 49.32 | 50.51 | 51.71 | 52.91 | 54.11 | 55.30 | 56.50 | 57.70 | 35 |
| 34 | 44.50 | 45.70 | 46.90 | 48.09 | 49.29 | 50.49 | 51.68 | 52.88 | 54.08 | 55.27 | 56.47 | 57.66 | 34 |
| 33 | 44.48 | 45.67 | 46.87 | 48.07 | 49.26 | 50.46 | 51.65 | 52.85 | 54.04 | 55.24 | 56.43 | 57.63 | 33 |
| 32 | 44.45 | 45.65 | 46.84 | 48.04 | 49.23 | 50.42 | 51.62 | 52.81 | 54.01 | 55.20 | 56.39 | 57.59 | 32 |
| 31 | 44.42 | 45.61 | 46.81 | 48.00 | 49.19 | 50.39 | 51.58 | 52.77 | 53.97 | 55.16 | 56.35 | 57.54 | 31 |
| 30 | 44.39 | 45.58 | 46.77 | 47.96 | 49.16 | 50.35 | 51.54 | 52.73 | 53.92 | 55.11 | 56.30 | 57.49 | 30 |
| 29 | 44.35 | 45.54 | 46.73 | 47.92 | 49.11 | 50.30 | 51.49 | 52.68 | 53.87 | 55.06 | 56.25 | 57.44 | 29 |
| 28 | 44.31 | 45.50 | 46.69 | 47.88 | 49.07 | 50.25 | 51.44 | 52.63 | 53.82 | 55.00 | 56.19 | 57.37 | 28 |
| 27 | 44.27 | 45.45 | 46.64 | 47.83 | 49.01 | 50.20 | 51.39 | 52.57 | 53.75 | 54.94 | 56.12 | 57.31 | 27 |
| 26 | 44.22 | 45.41 | 46.59 | 47.77 | 48.96 | 50.14 | 51.32 | 52.50 | 53.69 | 54.87 | 56.05 | 57.23 | 26 |
| 25 | 44.17 | 45.35 | 46.53 | 47.71 | 48.89 | 50.07 | 51.25 | 52.43 | 53.61 | 54.79 | 55.97 | 57.15 | 25 |
| 24 | 44.11 | 45.28 | 46.46 | 47.64 | 48.82 | 50.00 | 51.17 | 52.35 | 53.53 | 54.70 | 55.88 | 57.05 | 24 |
| 23 | 44.04 | 45.21 | 46.39 | 47.56 | 48.74 | 49.91 | 51.09 | 52.26 | 53.43 | 54.61 | 55.78 | 56.95 | 23 |
| 22 | 43.96 | 45.13 | 46.31 | 47.48 | 48.65 | 49.82 | 50.99 | 52.16 | 53.33 | 54.50 | 55.66 | 56.83 | 22 |
| 21 | 43.88 | 45.04 | 46.21 | 47.38 | 48.55 | 49.71 | 50.88 | 52.04 | 53.21 | 54.37 | 55.54 | 56.70 | 21 |
| 20 | 43.78 | 44.94 | 46.11 | 47.27 | 48.43 | 49.59 | 50.75 | 51.92 | 53.08 | 54.24 | 55.40 | 56.55 | 20 |
| 19 | 43.67 | 44.83 | 45.99 | 47.14 | 48.30 | 49.46 | 50.61 | 51.77 | 52.93 | 54.08 | 55.23 | 56.39 | 19 |
| 18 | 43.54 | 44.70 | 45.85 | 47.00 | 48.15 | 49.31 | 50.46 | 51.61 | 52.75 | 53.90 | 55.05 | 56.20 | 18 |
| 17 | 43.40 | 44.55 | 45.69 | 46.84 | 47.99 | 49.13 | 50.27 | 51.42 | 52.56 | 53.70 | 54.84 | 55.98 | 17 |
| 16 | 43.24 | 44.38 | 45.52 | 46.66 | 47.79 | 48.93 | 50.07 | 51.20 | 52.34 | 53.47 | 54.61 | 55.74 | 16 |
| 15 | 43.06 | 44.18 | 45.31 | 46.44 | 47.57 | 48.70 | 49.83 | 50.95 | 52.08 | 53.21 | 54.33 | 55.46 | 15 |
| 14 | 42.87 | 43.95 | 45.07 | 46.19 | 47.31 | 48.43 | 49.55 | 50.67 | 51.78 | 52.90 | 54.02 | 55.13 | 14 |
| 13 | 42.67 | 43.68 | 44.79 | 45.90 | 47.01 | 48.12 | 49.23 | 50.33 | 51.44 | 52.54 | 53.65 | 54.75 | 13 |
| 12 | 42.26 | 43.36 | 44.46 | 45.56 | 46.65 | 47.75 | 48.84 | 49.94 | 51.03 | 52.12 | 53.21 | 54.31 | 12 |
| 11 | 41.89 | 42.98 | 44.06 | 45.15 | 46.23 | 47.31 | 48.39 | 49.47 | 50.55 | 51.62 | 52.70 | 53.78 | 11 |
| 10 | 41.45 | 42.51 | 43.58 | 44.65 | 45.71 | 46.78 | 47.84 | 48.90 | 49.96 | 51.02 | 52.08 | 53.14 | 10 |
| 9 | 40.99 | 41.94 | 42.99 | 44.03 | 45.09 | 46.12 | 47.16 | 48.21 | 49.25 | 50.29 | 51.33 | 52.37 | 9 |
| 8 | 40.20 | 41.22 | 42.24 | 43.26 | 44.29 | 45.30 | 46.32 | 47.34 | 48.36 | 49.38 | 50.40 | 51.41 | 8 |
| 7 | 39.29 | 40.29 | 41.28 | 42.27 | 43.27 | 44.26 | 45.25 | 46.24 | 47.23 | 48.22 | 49.21 | 50.20 | 7 |
| 6 | 38.09 | 39.04 | 40.00 | 40.96 | 41.92 | 42.88 | 43.84 | 44.79 | 45.75 | 46.71 | 47.67 | 48.63 | 6 |
| 5 | 36.38 | 37.30 | 38.22 | 39.14 | 40.06 | 40.98 | 41.90 | 42.82 | 43.74 | 44.67 | 45.59 | 46.52 | 5 |
| 4 | 33.87 | 34.78 | 35.68 | 36.45 | 37.33 | 38.21 | 39.09 | 39.98 | 40.86 | 41.75 | 42.64 | 43.53 | 4 |
| 3 | 29.60 | 30.44 | 31.29 | 32.13 | 32.99 | 33.84 | 34.70 | 35.56 | 36.42 | 37.29 | 38.16 | 39.03 | 3 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |

MORTGAGE PREPAYMENT PENALTY TABLES
PER $1000

| | |
|---|---|
| CURRENT RATE | 8.00 |
| CONTRACT RATE | 9.25 |
| month to TERM | 49 to 60 |

CURRENT RATE - 8.00 - CURRENT RATE

MONTHS REMAINING to term

| YEARS LEFT IN AM PERIOD | 49 MON | 50 MONS | 51 MONS | 52 MONS | 53 MONS | 54 MONS | 55 MONS | 56 MONS | 57 MONS | 58 MONS | 59 MONS | 60 MONS | YEARS LEFT IN AM PERIOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 59.93 | 60.18 | 61.38 | 62.58 | 63.78 | 64.98 | 66.18 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 39 |
| 38 | 59.96 | 60.16 | 61.35 | 62.55 | 63.75 | 64.95 | 66.15 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 38 |
| 37 | 59.93 | 60.13 | 61.32 | 62.52 | 63.72 | 64.92 | 66.11 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 37 |
| 36 | 59.90 | 60.09 | 61.29 | 62.49 | 63.68 | 64.88 | 66.08 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 36 |
| 35 | 59.86 | 60.06 | 61.25 | 62.45 | 63.64 | 64.84 | 66.03 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 35 |
| 34 | 59.82 | 60.02 | 61.21 | 62.41 | 63.60 | 64.79 | 65.99 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 34 |
| 33 | 59.78 | 59.97 | 61.17 | 62.36 | 63.55 | 64.74 | 65.94 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 33 |
| 32 | 59.73 | 59.92 | 61.12 | 62.31 | 63.50 | 64.69 | 65.88 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 32 |
| 31 | 59.68 | 59.87 | 61.06 | 62.25 | 63.44 | 64.63 | 65.82 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 31 |
| 30 | 59.62 | 59.81 | 61.00 | 62.19 | 63.37 | 64.56 | 65.75 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 30 |
| 29 | 59.56 | 59.75 | 60.93 | 62.12 | 63.30 | 64.49 | 65.67 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 29 |
| 28 | 59.49 | 59.67 | 60.86 | 62.04 | 63.22 | 64.41 | 65.59 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 28 |
| 27 | 59.41 | 59.59 | 60.77 | 61.95 | 63.13 | 64.31 | 65.49 | 66.60 | 66.60 | 66.60 | 66.60 | 66.60 | 27 |
| 26 | 59.33 | 59.50 | 60.68 | 61.86 | 63.04 | 64.21 | 65.39 | 66.57 | 66.60 | 66.60 | 66.60 | 66.60 | 26 |
| 25 | 59.23 | 59.40 | 60.58 | 61.75 | 62.93 | 64.10 | 65.27 | 66.45 | 66.60 | 66.60 | 66.60 | 66.60 | 25 |
| 24 | 59.12 | 59.29 | 60.46 | 61.63 | 62.81 | 63.98 | 65.15 | 66.32 | 66.60 | 66.60 | 66.60 | 66.60 | 24 |
| 23 | 59.00 | 59.17 | 60.34 | 61.50 | 62.67 | 63.84 | 65.00 | 66.17 | 66.60 | 66.60 | 66.60 | 66.60 | 23 |
| 22 | 58.87 | 59.03 | 60.19 | 61.35 | 62.52 | 63.68 | 64.84 | 66.00 | 66.60 | 66.60 | 66.60 | 66.60 | 22 |
| 21 | 58.71 | 58.87 | 60.03 | 61.19 | 62.34 | 63.50 | 64.66 | 65.81 | 66.60 | 66.60 | 66.60 | 66.60 | 21 |
| 20 | 58.54 | 58.69 | 59.85 | 61.00 | 62.15 | 63.30 | 64.45 | 65.60 | 66.60 | 66.60 | 66.60 | 66.60 | 20 |
| 19 | 58.35 | 58.49 | 59.64 | 60.79 | 61.93 | 63.08 | 64.22 | 65.37 | 66.51 | 66.60 | 66.60 | 66.60 | 19 |
| 18 | 58.13 | 58.27 | 59.41 | 60.54 | 61.68 | 62.82 | 63.96 | 65.10 | 66.24 | 66.60 | 66.60 | 66.60 | 18 |
| 17 | 57.87 | 58.00 | 59.14 | 60.27 | 61.40 | 62.53 | 63.66 | 64.79 | 65.92 | 66.60 | 66.60 | 66.60 | 17 |
| 16 | 57.58 | 57.71 | 58.83 | 59.95 | 61.07 | 62.20 | 63.32 | 64.44 | 65.56 | 66.60 | 66.60 | 66.60 | 16 |
| 15 | 57.25 | 57.38 | 58.47 | 59.59 | 60.70 | 61.81 | 62.92 | 64.03 | 65.15 | 66.26 | 66.60 | 66.60 | 15 |
| 14 | 56.86 | 56.98 | 58.06 | 59.16 | 60.26 | 61.36 | 62.47 | 63.57 | 64.67 | 65.77 | 66.60 | 66.60 | 14 |
| 13 | 56.40 | 56.49 | 57.58 | 58.67 | 59.75 | 60.84 | 61.93 | 63.02 | 64.11 | 65.19 | 66.28 | 66.60 | 13 |
| 12 | 54.85 | 55.93 | 57.00 | 58.08 | 59.15 | 60.23 | 61.30 | 62.37 | 63.45 | 64.52 | 65.59 | 66.60 | 12 |
| 11 | 54.20 | 55.26 | 56.32 | 57.38 | 58.43 | 59.49 | 60.55 | 61.60 | 62.66 | 63.72 | 64.77 | 65.83 | 11 |
| 10 | 53.41 | 54.45 | 55.49 | 56.52 | 57.56 | 58.60 | 59.64 | 60.68 | 61.72 | 62.75 | 63.79 | 64.83 | 10 |
| 9 | 52.43 | 53.45 | 54.46 | 55.48 | 56.49 | 57.51 | 58.53 | 59.54 | 60.56 | 61.58 | 62.60 | 63.61 | 9 |
| 8 | 51.19 | 52.18 | 53.17 | 54.17 | 55.16 | 56.15 | 57.14 | 58.13 | 59.12 | 60.12 | 61.11 | 62.11 | 8 |
| 7 | 49.59 | 50.55 | 51.51 | 52.48 | 53.44 | 54.40 | 55.37 | 56.33 | 57.30 | 58.26 | 59.23 | 60.20 | 7 |
| 6 | 47.44 | 48.37 | 49.30 | 50.23 | 51.16 | 52.10 | 53.03 | 53.97 | 54.90 | 55.84 | 56.78 | 57.72 | 6 |
| 5 | 44.43 | 45.32 | 46.22 | 47.12 | 48.02 | 48.93 | 49.83 | 50.74 | 51.65 | 52.56 | 53.48 | 54.39 | 5 |
| 4 | 39.90 | 40.78 | 41.66 | 42.54 | 43.42 | 44.31 | 45.20 | 46.10 | 46.99 | 47.89 | 48.79 | 49.69 | 4 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1 |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |

Appendix No. 3

## Rate variations and expected prepayment penalties

### Conventional Mortgage lending rates
### Jan. 1965 to Oct. 1976

| (1) Time Span (years) | (2) Average variation in rate during period | (3) Approximate equivalent penalty (months) | (4) Maximum expected variation (99.5% interval of confidence) | (5) Approximate equivalent penalty (months) |
|---|---|---|---|---|
| 1 | 0.5% | 1.5 months | 2.5% | 8 months |
| 2 | 1.0% | 2.5 " | 3.75% | 9.75 " |
| 3 | 1.25% | 2.25 " | 4.75% | 8.5 " |
| 4 | 1.5% | 1.5 " | 4.75% | 4.5 " |

This tables shows the average variation in rate that occured in the conventional mortgage lending rate over various time spans (one to four years) during the period January 1965 to October 1976. It also gives the maximum expected variation in rate for the same time spans (one to four years) given a 99.5% interval of confidence. Average and maximum variations are also expressed in terms of equivalent months of penalty at the contract rate.

The series used for the calculation is the monthly series published in the Bank of Canada Review for Conventional mortgage loans.

Calculations were made with the assumption that the general uptrend in rates experienced over the twelve year period under review could convert to a similar downtrend in the future. Also, percentage figures have been rounded to the next 0.25% and months are rounded to nearest 0.25 month.

The equivalent penalty figures are approximate since they correspond to a mortgage with a 25 years amortization period, a 12% contract rate and where the penalties are calculated so as to cover the present value of the expected loss that would result for the lender if prepayment occured at the first, second, third and fourth anniversaries of the first five year term of the mortgage loan, for rate drops as per column 2 and 4.

As can be seen from this table, on the average the interest loss to the lender would range from 1.5 to 2.5 months of interest calculated at the contract rate if rates were to drop in a way similar as their increases of the last twelve years. Adding those figures to the fixed penalty component

allowed for administrative costs would mean that borrower would face penalties ranging from 2.75 to 3.4 months on the average in situations where rates have dropped on the market.

CACC / CCAC
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| BF - RED | BY - YELLOW |
| BG - BLACK | BA - TANGERINE |
| BD - GREY | BB - ROYAL BLUE |
| BU - BLUE | BX - EXECUTIVE RED |
| BP - GREEN | |

SPECIFY NO. & COLOR CODE

ACCO CANADIAN COMPANY LTD.
TORONTO CANADA