RESEARCH REPORT

Policy Options Towards Alternative Market Structures in the Mortgage Insurance Industry

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POLICY OPTIONS TOWARDS ALTERNATIVE MARKET STRUCTURES
IN THE MORTGAGE INSURANCE INDUSTRY

Report prepared by

Richard G. Harris
Department of Economics
Queen's University, Canada K7L 3N6

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1. Introduction

The purpose of this report is to assess the policy options with regard to public sector intervention in the mortgage insurance industry in Canada. Specifically the report addresses the possible role for public policy with respect to market structure in the mortgage insurance industry. Basic questions concerning whether this industry can be made "competitive" will be addressed, as will the case for the possibility that the industry is a "natural monopoly". In the latter case basic issues regarding regulation versus public ownership are taken up. Broader issues regarding possible market failures in the mortgage insurance industry due to non-diversifiable risk, informational problems due to moral hazard or adverse selection, and particular features of the mortgage insurance market which derive from the existence of regulations on the mortage market itself are not taken up.

It is worth noting at the outset two basic features of the mortgage insurance market which are essential to what follows. First, that mortgage insurance is a derived demand, resulting from the demand for mortgages largely from first-time homebuyers. The dramatic decline in household formation in the 25-34 age group which is predicted for Canada suggests that the demand for new mortgages, and hence mortgage insurance is likely to fall substantially. The industry therefore is most likely to be a declining industry over the next ten to twenty years. The second basic feature of the market is that a principal source of demand for mortgage insurance results from the imposition of a regulation on the provision of mortgages which requires that mortgage loans in excess of the prescribed maximum loan to value ratio be insured by either CMHC, or its private competitor, the

Mortgage Insurance Company of Canada (MICC). This report will presume this regulation is unlikely to be removed.

The current situation is one of public-private competition between CMHC and MICC, with the industry experiencing substantial difficulties, particularly due to defaults on mortgages in Alberta. The competition between CMHC and MICC is widely believed to be "unfair" in that CMHC has recourse to the financial resources of the federal government, and therefore is not subject to the same bottom-line constraints that MICC must face. In assessing possible courses of action directed towards influencing market structure in this industry, it must be realized that long-term prospects for growth in the industry are minimal, and further that any additional entry by the private sector into the industry is unlikely given the continued presence of CMHC as the dominant firm within the industry. The implication of these observations is that it is practical to consider public policy during a transition period, of say ten years, as well as long term public policy towards the industry. The report focuses on possible scenarios regarding the evolution of market structure in this industry largely using the insights provided by economic theory, and studies of industrial organization in related industries. This author was unable to find much in the way of hard evidence regarding the key structural parameters on demand and technology in any of the background reports provided by CMHC, or the widely cited 1982 report of the Economic Council of Canada, or the Matthews Task Force.

2. Is the Mortgage Insurance Industry Potentially Competitive?

In this section the basic case for a competitive market structure emerging 'in the long run' is addressed. The first part of the report reviews the theory of contestable markets and its possible relevance to the mortgage insurance industry of Canada. The second part of this section presents a more relevant approach towards examining the merits of a free market approach towards the industry.

2.1 The Contestable Markets Approach to Competition

The theory of contestable markets as developed by Baumol, Panzar and Willig (1982) seems to be giving some economists and laymen the impression that traditional concerns about scale economies, entry barriers, and concentration should no longer be of any relevance in addressing the allocative efficiency of a market. Nothing could be further from the truth. There are two basic points to be made. First, the theory as it is expounded is completely irrelevant to any known market, with a couple of minor examples to the contrary. Second, the theory is not new but simply a re-phrasing of traditional perfect competition theory in a more extreme form. It is my opinion that the theory of contestable markets is virtually useless as a guide to sensible economic analysis of markets, or to the design of public policy. The successful deregulation of the airline industry in the United States is not a result of contestability of that industry. This commonly used example is extremely misleading.

A contestable market has two basic features. One, entry and exit from the industry must be both costless and instantaneous. The feature of costless exit and entry implies a firm must be able to both a) replicate the entire production, marketing, sales, and finance facilities of an existing firm in a very short period of time, and b) having replicated these facilities must be able to sell them off to other industries in unrelated lines of business at virtually no loss. Another way of thinking about this is that it requires that all items on the balance sheet of the firm must have a well-developed market on which they can be bought and sold. These assets must not be specific to either the industry or the firm. Were this not the case the firm could enter, but it could not exit without suffering losses. This condition is referred to by economists as the complete absence of sunk costs. Sunk costs have both a physical and time dimension to them. The physical definition relates at a point in time to those items on the balance sheet of the firm which cannot be immediately liquidated at a value equal to the initial cost, allowing for normal depreciation. The time dimension relates to the speed at which a sunk cost can be liquidated without suffering undue loss on the assets. Therefore we distinguish between a capital asset or liability which constitutes a sunk cost over a two year horizon versus a six month horizon. A contestable market requires that all firms in the industry, and any potential entrant have no sunk costs within the shortest conceivable market period. In addition there can be no costs which are non-recoverable and specific to the act of exit or entry.

A second basic feature of a contestable market is that a potential entrant to the industry must believe that the prices the existing firm(s) are charging will continue to be the price that it will charge <u>after</u> the entrant comes in. Another way of stating this is that entry induces no response from the incumbent firms within the industry. As numerous critics have noted this is an absurd assumption, and at odds with virtually all empirical studies of competition. It does not, for example, describe the U.S. airline industry. It might be a reasonable assumption for a new firm entering a highly competitive industry with large numbers of firms selling a highly standardized product. But this, of course, is just the standard model of a perfectly competitive industry.

The theory of contestable markets has been sold as a justification for a free market position in those industries where there are a very few large firms serving the market. If these markets are contestable they will yield the most efficient allocation of resources which is technically feasible. The basic idea is that under the assumptions of the theory, pricing and output decisions of the firms in the industry will be constrained by the instantaneous entry of outside firms at the slightest deviation from least-cost pricing; furthermore profit rates in these industries should be the same as in the most highly competitive industries, and intra-industry variation in profit rates should be nil. In the extreme case a monopolist will produce a perfectly competitive outcome given the overwhelming importance of potential, not actual, competitors. Given the assumptions of the theory it is correct (logically), but is it relevant? The answer is surely no. Devastating criticisms of the theory have been offered by Brock (1983) and Shepherd (1984). It is virtually impossible to find a market in which there is not some significant element of sunk cost, even the most competitive markets. Secondly, there is no justification for the extreme assumption made on non-retaliation by incumbents for most markets in which the number of existing firms is few. Thirdly, the traditional evidence in industrial organization supports the hypothesis that markets which are concentrated have a greater than normal level of sunk costs. Therefore the theory seems least applicable to those instances where its policy implications seemed most relevant.

Finally, it is worth emphasizing that the case for free markets does not rely on a market being contestable. Fortunately economists have much more realistic theories as a guide to circumstances in which the market will produce reasonably efficient outcomes. I shall return to this below.

2.2 Is the Mortgage Insurance Market Contestable?

Is it conceivable the mortgage insurance market in Canada is contestable? What evidence we have suggests this is certainly not the case. First, and foremost, there is a very important element of sunk cost on the balance sheet of a mortgage insurance firm -- this is the liabilities which it has in the way of obligations to existing policy holders. These obligations cannot be voided and last for the life of the underlying primary mortgage, one to five years. It is worth noting that in the case of a static unchanging economic environment, a genuine insurance market in which the underlying risks were diversifiable may give rise to minimal sunk costs. In this circumstance the insurance policies of an existing firm might well be sold to another firm with little loss in value to the seller. The problem with mortgage insurance is that the basic risk in non-diversifiable and highly correlated with the level of aggregate economic activity in the economy. Therefore the potential for re-selling mortgage insurance policies without suffering some significant loss, particularly on the downside, is non-existent.

The second factor, of course, is that the basic behavioural premise of contestable markets theory regarding the pricing behaviour of incumbents is certainly dubious in the context of mortgage insurance. Imagine a private monopolist who served the entire Canadian market and was unregulated. The theory requires that in the face of entry by a new firm, or entry into its line of business by a firm in some other industry, the monopolist would not change its premium structure, independent of what the entrant did -- even were the entrant to undercut it for example. Studies of other concentrated sectors show no support for this hypothesis. Canadian banks provide one example where most price cuts are matched, as are price increases. The more convincing hypothesis is one of collusive price leadership by the incumbent oligopoly with vigorous price competition in the face of new entry.

This evidence is obviously impressionistic, but I have no reason to believe a more detailed study would provide convincing evidence that the basic premises underlying contestable markets theory are relevant for the mortgage insurance industry in Canada. It should also be evident that the question as to whether the industry can 'be made contestable' really makes little sense. The question comes up because if you believe that the underlying technology and behaviour of firms is consistent with a contestable market view, then of course government regulation of either prices or entry can render a contestable market, uncontestable. In the case of mortgage insurance it is conceivable that the presence of CMHC in the market is producing non-contestable results because it is levying premiums which are below minimum cost premiums. In this case all private supply would withdraw from the market, even if it were a truly contestable industry. In current circumstances withdrawal by CMHC would leave MICC in a monopoly position. The worries expressed by the Matthews report and the Economic Council of Canada regarding the exploitation of shortrun and possibly longrun monopoly power by MICC seems to be quite relevant.

2.3 An Alternative View of Competition

In this section I would like to suggest that a more relevant case for free markets is the monopolistic competition view of market structure, or as it is sometimes phrased - "oligopolistically competitive". The basic idea is that one does not need an extreme case of large numbers perfect competition to get a reasonably efficient outcome in most markets. Unfortunately, there are no strict theoretical guidelines as to ensure or to define what the appropriate degree of competition is, but qualitatively the characteristics of markets in which competition works are well known and agreed upon by a number of economists.[1] These are

(i) Competition must be effective on all participating firms in the industry. Effective competition comes about either from the existence of products which are close substitutes for the firm's own product, or the existence of firms within the industry who price a similar product in a non-collusive way.

(ii) Competition as described in (i) is most likely when entry barriers in the form of scale economies, absolute capital requirements, or cost advantages is minimal. However, even if substantial entry barriers exist provided the existing firms within the industry do not collude reasonably efficient outcomes can be expected. This is particularly true if scale economies dictate large firm production as the most efficient organization of industry. Combines policy plays an obviously important role in such industries, by limiting the scope for explicit collusion.

(iii) Regulation of either prices, entry, or the appearance of competing products can substantially reduce the effectiveness of these types of markets in yielding efficient outcomes.

(iv) In a small open economy such as Canada an important source of competition is from imports, or entry by foreign firms. Efficiency in most Canadian markets for goods and services can be improved by removing regulations which inhibit the ability of competing imports or foreign firms to enter the market. This is of particular importance in those markets where the domestic industry is concentrated.

This view of the market process is much more relevant than an extreme contestable markets view. Government regulation or state monopoly/oligopoly is left as the option in those markets where natural monopoly or collusive oligopolies (cartels) are the natural market outcome. It is a view which is shared by a large number of economists including the Chicago School and Alfred Kahn, the author of much of the literature on deregulation and a prime mover in the case of airline deregulation in the United States. The view is supported by a substantial body of empirical work which finds that industries with a few symmetrically sized oligopolists are often extremely technically efficient with prices close to marginal cost. The analytical model supporting such a view is the model of monopolistic competition as developed by Michael Spence (1975), or the theory of non-cooperative oligopoly developed by a number of economists over the last two decades. In my view it is the most relevant benchmark industry structure against which to judge alternatives. It is for example more relevant than the simple theory of perfect competition as taught in elementary economic textbooks.

3. Market Structure - the Policy Options in Mortgage Insurance

This discussion is most usefully divided into two topics - first, the basic options for the industry in the longer run, ignoring some of the current problems, and second, particular issues which arise because of current economic circumstances in the industry and any transitional problems given a change from the status quo.

3.1 The Basic Policy Question

In light of section 2 the basic policy question is what the long run free market solution would look like in the absence of public sector intervention, including the participation of CMHC in the mortgage insurance market. There are two sources of effective competition in this industry. Close substitutes on the demand side which serve to increase the elasticity of the market demand curve for mortgage insurance. There is no doubt such close substitutes exist, and could emerge in an unregulated market. For example, both second mortgages and self insurance by mortgage lending institutions are devices which serve to expand the set of competing products for mortgage insurance. If this competition in substitutes is sufficiently great, a monopoly outcome in the mortgage insurance industry should be of no concern for public policy on efficiency criteria.

The second source of effective competition, even in the absence of the existence of close substitutes on the demand side, would be the entry of new firms, or existing firms from unrelated lines of business, into the mortgage insurance market in Canada. The basic question here is what is a reasonably efficient sized firm given the market? Could the Canadian market support two to three private oligopolists providing similar sorts of coverage all competing in the same urban markets? If the answer is yes, then the case for a policy of gradual government withdrawal could be made. Related is the question of foreign competition. The market might well be effectively competitive with only domestic firm, but competition from two or more foreign firms. Given the increasing emphasis by both American and Canadian trade policy on reducing barriers in financial services this is obviously relevant to the mortgage insurance industry in Canada. The North American market might well support a reasonably competitive mortgage insurance industry, even if the Canadian market could not. This is a policy option which requires further thought.

There does not seem to be any convincing evidence either for or against the emergence of this type of industry structure in the material I have seen. This seems to be a major gap in the analysis for an evaluation of appropriate public policy in this area.

The other basic long run policy question is regarding the type of public sector intervention, should an analysis conclude that effective competition in the mortgage insurance market is unlikely to emerge in the absence of government intervention. The question then becomes whether the industry should be regulated , or the product should be publically povided. The option of public/private competition does not seem relevant in this instance because of the "unfair competition" argument alluded to earlier -- in a highly cyclical and risky industry it is difficult to appropriately define bottom line considerations for a public sector firm. My own inclination in this regard is that regulation of a privately owned firm is preferred to supply by a public monopoly. The main argument for this is the comparative advantage the private sector has in creating incentives for efficiency in supply relative to the public sector. This is true even in those instances where the public sector regulates the private sector. The policy recommendation in this case would be that CMHC withdraw from the mortgage insurance industry, and some form of regulation on the pricing and underwriting practices of MICC be instituted.

Having said this, however, it must be recognized there are a number of difficulties. Regulation itself suffers from a variety of "administrative failures" much emphasized in the literature on public utility regulation in the United States. It is conceivable that entry would have to be regulated as well. The regulator could easily set a premium structure that would yield above normal returns, particularly if defaults on mortgages declined say due to a long period of economic growth. If entry attracts firms in closely related lines of activity, for example those firms providing mortgages, then the thorny problem of cross-subsidization arises. Cross-subsidization between regulated and unregulated lines of activity often leads to a demand for further regulation and association inefficiencies. On the other hand if entry is prohibited technical efficiencies which might arise through economies of scope[2] could easily be foregone. A final difficulty with regulation of the mortgage insurance industry is that it would add to an already existing structure of regulation on the insurance and financial services industry. This comes at a time when there are renewed calls for deregulation in these industries.

In summary then the case for regulation versus a public monopoly, such as provision through CMHC with the withdrawal of MICC from the market, is not at all clear. If the mortgage insurance industry is a genuine natural monopoly then addressing these issues would clearly be an important priority.

3.2 Current Circumstances and Transition Issues

The anticipated fall in the demand for mortgage insurance throughout the next decade implies that market structure, in the event that the industry were privatized, might be changing for some time. In this case the role for a public sector supplier in the interim might well make sense. Suppose it were decided that the long term basis for a privatized market with no intervention was clearly established. Then the short term difficulty is that withdrawal by CMHC would leave MICC with a monopoly. This would create profits for MICC, which in turn would attract entry as desired, but in the interim the welfare of consumers would be sacrificed as reflected in the higher premiums they would be charged. Given that housing has long been treated by government as a merit good this situation might not be acceptable politically. A sensible transition policy might be something like the following. CMHC would announce its long-term intentions of withdrawing from the market. It would announce this according to some strict schedule. A target date for withdrawal would be based on some reasonable expectation as to the time required for entry to take place. In addition CMHC would consider the possibility of turning over its existing business to new firms and MICC on a competitive basis. At the same time CMHC would continue to offer mortgage insurance on what it best perceived to be a true cost basis for a private firm equivalent. True cost should be calculated to include some premium appropriately reflecting the risk a new firm entering the industry would face on its investment. This would yield a price below the monopoly price but above the competitive price. By disciplining price in the market CMHC would insure against undue losses to consumer welfare. At the same time by creating a reasonable level of profits in the industry, it would hopefully attract one or two private firms to enter the industry, so that MICC was not in a monopoly position at the exit date for CMHC.

The major difficulty for a government agency in exercising such a policy is to establish credibility with the private sector from whom the appropriate investment response is required. This is a difficult political problem which any government must face. Perhaps the current government has less difficulty in this respect than past governments.

The transition issues, in the event it is decided that natural monopoly is the market outcome, are certainly less significant.

4. Conclusion and Proposal

My main conclusion is that the case for or against an unregulated private market approach to mortgage insurance in Canada remains to be established. The mortgage insurance industry is not contestable, but this is not the relevant benchmark agianst which the market case should be judged. I have outlined what is a more sensible benchmark -- that of a non-collusive oligopolistically competitive industry. To establish whether such an industry structure is likely to emerge clearly needs further research. This would involve

a) examining the possible emergence of competing close substitutes for mortgage insurance and the impact this would have on the elasticity of demand facing firms in the mortgage insurance industry;

b) a consideration of scale and scope economies within the industry; (Interviews with industry people, together with an examination of the U.S. and Australian experience, could provide evidence on these matters.)

c) the degree to which there are sunk costs in the industry and the time scale involved in both entering and leaving the industry;

d) a closer examination of the role international competition and financial deregulation might have on the case for or against an effectively competitive mortgage insurance industry;

e) estimating the impact the current and future decline in demand for mortgages would have on the expected pattern of entry and pricing in response to a withdrawal of CMHC from the market.

This is a minimal research program which would provide some basis for proceeding with either policy option outlined in section 3. Further research would be required should it prove necessary to discriminate between regulation versus public monopoly provision of mortgage insurance. In my opinion the research program outlined here is first in terms of basic priorities.

To carry out such a research program would involve three to four weeks of my time, with an additional two person-months of research assistance. This would not constitute a data intensive econometric analysis at both the firm and industry level. To undertake the latter would be considerably more ambitious and costly. It would also take much longer; eighteen months probably at a minimum given my experience in collecting data from often unwilling firms. The project as outlined could be completed by October of 1985, if inititated this spring. If a report of this nature was desired but on a tighter schedule it would be necessary for me to bring in another principal researcher. I would need to act reasonably soon if this was desirable. It is by no means certain such a person could be found. I am, of course, prepared to provide a more detailed budget on request.

Notes

1. An exhaustive listing of the literature supporting this view hardly seems necessary. It is what I would regard as the "mainstream" middle-of-the-road view. Prominent examples include statements by Peltzman (1977), Shepherd (1975), and Williamson (1975).

2. Economies of scope exist if multiple products jointly produced yield a lower cost per product than would separate production/provision for each individual product.

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