RESEARCH REPORT

External Research Program

Analysis of Pension and RRSP Investments in Canadian Rental Housing

Canada

CMHC SCHL

HOME TO CANADIANS

CMHC—HOME TO CANADIANS

Canada Mortgage and Housing Corporation (CMHC) has been Canada's national housing agency for more than 65 years.

Together with other housing stakeholders, we help ensure that the Canadian housing system remains one of the best in the world. We are committed to helping Canadians access a wide choice of quality, environmentally sustainable and affordable housing solutions that will continue to create vibrant and healthy communities and cities across the country.

For more information, visit our website at **www.cmhc.ca**

You can also reach us by phone at 1-800-668-2642 or by fax at 1-800-245-9274.

Outside Canada call 613-748-2003 or fax to 613-748-2016.

Canada Mortgage and Housing Corporation supports the Government of Canada policy on access to information for people with disabilities. If you wish to obtain this publication in alternative formats, call 1-800-668-2642.

AN ANALYSIS OF PENSION AND RRSP INVESTMENTS IN CANADIAN RENTAL HOUSING

A Report Prepared for Canada Mortgage and Housing Corporation
by
Alex S. MacNevin

26 March 2001

This project was carried out with the assistance of a financial contribution from Canada Mortgage and Housing Corporation under the terms of the External Research Program. The views expressed are those of the author and do not represent the official views of CMHC.

The author would like to thank David Metzak and Ian Melzer of the Research Division, CMHC for providing useful comments and suggestions.

ABSTRACT

This study assesses whether Canadian registered pension plans (RPPs) and retirement savings plans (RRSPs) currently under-invest in rental housing, and if so, whether there are specific obstacles to investment and policy options that would potentially increase investment. The study methodology involves an integrated approach consisting of five elements: a review of the legislative and regulatory environment; a synthesis of the theoretical and empirical literature on modern portfolio theory; a survey of pension funds and money managers; a comparative assessment of the Canadian/U.S. environments and results; and a quantitative analysis of rental housing investments by RPPs/RRSPs. The primary focus of the study is on equity investments. The study finds that RPPs/RRSPs hold only minuscule amounts of rental housing investments. The evidence presented indicates that there is substantial scope for increasing RPP/RRSP investment in rental housing, assuming current obstacles can be removed. Any significant boost in the flow of such savings to rental housing could substantially increase equity investments in the sector and potentially lower costs and rents. The study identifies a number of specific obstacles to investment and makes suggestions for improving the investment climate.

EXECUTIVE SUMMARY

Introduction

Accumulated savings of Canadians in registered pension plans (RPPs) and registered retirement savings plans (RRSPs) represent a potentially major source of equity investment in rental housing. In 1998, RPPs totalled $644 billion in book value while RRSPs were $241 billion. Together, this stock of accumulated savings comprises approximately one-half of the net financial wealth of Canadian persons and unincorporated businesses. It is also in excess of one-quarter of the value of all commercial and residential real estate (land and structures) in the country, or about one-half of the value of all residential real estate. However, existing statistical evidence suggests that real estate forms a relatively minor component of RPP/RRSP portfolios
in Canada and of pension plans and retirement savings plans in the United States.

Research Program

The purpose of this study was to examine patterns of RPP/RRSP equity investment in Canadian rental housing and the factors that affect the inclusion of such investments in RPP/RRSP portfolios. The study uses an integrated methodology that consists of a number of key elements, including:

- a review of the legislative and regulatory environment;
- a synthesis of the theoretical and empirical literature on modern portfolio theory;
- a survey of pension funds and money managers to collect data and to ascertain their current investment practices, perceptions and attitudes;
- a comparative assessment of the Canadian/United States environments and results; and
- a quantitative analysis of rental housing investments by RPPs/RRSPs.

Although the number of respondents to the survey was small relative to the total industry population, the author believes that the results are likely to be generally indicative of the industry practices and views.

Findings

RPPs/RRSPs under-invest in rental housing

The evidence presented in the study strongly supports the contention that RPPs/RRSPs currently under-invest in rental housing equity. Two general categories of evidence bolster this contention.

First, statistical evidence presented in the report indicates that RPPs/RRSPs hold far less real estate equity in their portfolios than the share of national wealth that is comprised of that asset. Real estate accounts for 27% of the value of national assets, but only for about 4% of pension fund assets and less than 1% of money manager assets. Data show that the real estate holdings of

pension plans in Canada are comparable in magnitude to holdings by United States funds. Evidence from the survey, shows that only 6% of pension funds and 3% of money managers hold rental housing equity investments. Moreover, the magnitude of rental housing investments is minuscule: 0.1% of assets in the case of the pension funds and 0.05% in the case of the money managers. The data show that the trend is stagnant. Over the past five years, real estate as a percentage of total pension fund assets has declined by about 0.9 percentage points (i.e., from 5.2% to 4.3%). This breaks down very roughly into a 1.1 percentage point drop for commercial properties and a 0.2 percentage point gain for rental housing properties.

The second category of evidence derives from the responses to the survey undertaken as a component of the study. These responses indicate that managers of pension funds and money management firms have strongly held negative views towards rental housing investments.

This evidence of under-investment does *not* imply that RPPs/RRSPs should under current circumstances hold more rental housing assets. A conclusion that they should under current circumstances hold more rental housing assets would imply that investment managers either don't know their business or are behaving irrationally–both of which are unlikely given the high degree of competition within the financial industry. Rather, the results should be interpreted as indicating that there is potentially substantial scope for increasing investments in rental housing by these organizations, *assuming* that the reasons for the low levels of investment are uncovered and that at least some of these obstacles are removed.

Obstacles to RPP/RRSP investments in rental housing

The study identifies many factors that could be impeding rental housing investments by RPPs/RRSPs.

Low rates of return

Data on returns to real estate investments for Canada, the United States and various other countries indicate that returns have consistently been lower and more volatile than the returns for stocks and, for most of the time, even bonds. Evidence for the United States shows that these low returns also apply in the case of rental housing investments. While there is currently no direct evidence specifically relating to rental housing in the case of Canada, the available indirect evidence suggests that returns may have been low relative to other types of investments.

While only one survey respondent (out of 30) specifically referred to low returns as a significant obstacle to investment in rental housing, a number of general comments were made that expected returns didn't warrant the effort that was required to make such investments. Among the factors identified by the respondents that might have a bearing on this are:

- rent controls;
- zoning restrictions and other regulatory rules;
- competition from public housing; and
- income tax rules that deter the turnover of existing buildings.

Regulatory restrictions

The study identifies a number of regulatory restrictions that could create obstacles to increased RPP/RRSP investment in rental housing. First, about 90% of pension funds in Canada are regulated at the provincial level (the rest are regulated federally) and there continues to be a lack of harmonization of the pension investment rules for provinces east of Ontario. This unnecessarily complicates the pension investment environment for rental housing.

Second, while the federal and provincial pension regulatory authorities have recently adopted the much more flexible "prudent person portfolio" approach to plan management, there still continue to be quantitative and qualitative restrictions on the ability of fund managers to make rental housing investments. The two most important quantitative restrictions in the case of rental housing investments limit a fund's investment in a single parcel of real property to not more than 5% of total assets, and the combined total of real and resource properties to not more than 25% of assets. While data and survey results show that most funds are well below these limits, they could still be preventing investment since even a modest amount of property diversification in portfolios would result in these limits being exceeded for a majority of funds.

In terms of qualitative restrictions, regulatory authorities require that a detailed investment plan be developed by each pension fund that specifies, among other things, the fund's investment strategy, categories of investments, approach to diversification, asset mix and objectives. The investment plan must be consistent with the prudent person portfolio philosophy, yet there are no clear guidelines as to how this would apply in the case of rental housing investments. This may create reluctance on the part of investment managers to venture into the rental housing area. This is particularly likely since very few funds have experience making such investments. It is also likely given the fact that, prior to the adoption of the prudent person portfolio philosophy, real estate investments were classified as "basket clause" investments and, together with other non-qualifying investments, could not exceed 7% of a fund's total assets. While the basket clause restriction has been removed, it may still create a psychological barrier for investment managers. Once the investment plan is developed, there may be a tendency for it to become institutionalized, which may create permanent barriers to rental housing investments.

The results from the survey confirm the legitimacy of these concerns. A number of respondents indicated that they thought rental housing investments were inconsistent with the prudent person portfolio philosophy, and a number of others referred to internal fund guidelines as preventing such investments.

Income tax restrictions

The impact of the income tax system was also examined in detail. Income tax legislation generally forbids direct investment by RRSPs in rental housing, although RRSPs are able to hold units in real estate investment trusts (REITs). In the case of RPPs, income tax legislation imposes complex conditions on the different arrangements that a fund can utilize to invest in rental housing, such as those through various pooled fund, corporate and partnership arrangements.

Also, certain arrangements for structuring rental housing investments have complex interactions with the income tax foreign property rules, which limit foreign investments for an RPP or RRSP to a maximum of 30% of the fund's assets. Some arrangements run the risk of being classified as foreign property and thus either using up valuable foreign property room or exposing the fund to penalty provisions; alternatively, other arrangements may earn extra foreign property room for a fund. In general, while there are a wide variety of options available for pension investments in rental housing, income tax restrictions create many specific obstacles to pension funds that do not exist for other investors.

A number of survey respondents did identify income tax rules for investment vehicles as a significant impediment to investment. It may also be the case that many fund managers are simply unfamiliar with all of the complexities.

Factors relating to portfolio selection

The study assesses the ways in which the theoretical approach to portfolio management followed by fund managers could affect the attractiveness of an asset such as rental housing. Different frameworks focus on different risk-return features of assets and the way in which these characteristics interact with those of other assets in a portfolio setting. The major models in the modern theoretical finance literature that were examined in the study were:

- asset-specific and portfolio mean-variance models;
- the capital asset pricing model (CAPM);
- the asset pricing theory (APT) model;
- the international CAPM; and
- the international APT.

The survey responses indicate that of the 10 funds that responded to the question as to which model or approach they use:

- 50% do not use a specific formal model,
- 20% use a portfolio mean-variance approach,
- 10% use an asset-specific mean-variance approach,
- 10% use a synthetic derivative based approach, and
- 10% rely on fundamental analysis applied to each asset.

These responses are significant since they indicate that virtually none of the funds, in a formal sense, make use of information relating to the specific risk profiles of individual assets that derive from modern portfolio theory. This could have significant negative implications for the demand for rental housing equity investments because real estate is frequently promoted by analysts and academics on the basis of their beta-risk profile characteristics (particularly their inflation-hedging attributes and their low correlations with the stock market). The effects on asset demand can be dramatic. Research indicates that pension funds in the Netherlands typically allocate about 15% of their portfolios to real estate equity, roughly four times the historical level for Canadian and

United States funds, primarily because Dutch managers focus more on the inflation-hedging attributes of real estate.

Analysis in the report shows that the use of derivatives is proliferating among pension fund and money managers and that this might also be having a negative effect on the demand for rental housing equity investments. Derivatives can be used to construct designer portfolios of virtually unending risk/return characteristics, and might be used for portfolio diversification purposes at the expense of assets like rental housing.

Negative attitudes of investment managers

The survey responses indicate that the following factors are the primary sources of negative attitudes towards rental housing investments on the part of pension fund and money managers:

- Internal Fund Management Considerations (46% of negative responses), including, "general management attitudes," "lack of relevant investment expertise," "fund investment objectives and guidelines," and "prudent person investment considerations;"
- Characteristics of Rental Housing Investments (36%), including, "illiquidity of rental housing investments," "high management overhead," and "unavailability of suitable investment instruments," "high transaction costs for acquisitions/dispositions," "inability to value investment holdings precisely," "insufficient suitable investment opportunities," "competition from government subsidized housing," "high maintenance," "low return," "lack of interest," and "no market;"
- Legislative and Regulatory Restrictions (18%), including, "rent controls," "other landlord-tenant legislation or regulations," "federal *Pension Benefits Standards Act* or equivalent provincial legislation," "federal or provincial RPP/RRSP regulations," "other income tax rules on eligible investments," and "zoning regulations and rules."

Managers also expressed concerns about the negative "optics" potentially associated with such "social" investments, including landlord tenant disputes and tenant evictions. The views expressed indicate that in the typical case, rental housing investments are outside the sphere of investment choices made or considered by funds.

Suggestions to improve the investment environment

The study makes a number of suggestions that might encourage rental housing equity investments by RPP/RRSP funds. The study cautions that, while these could improve the investment environment, there is still insufficient knowledge about the relative importance of the different obstacles to predict what the result would be in terms of increased investment, the availability of equity financing for rental housing, or the level of rents. The major suggestions are to:

- determine whether low rates of return to real estate also extend to rental housing and, if so, take steps to identify and eliminate the contributing factors
- make improvements to the regulatory environment, such as:
  - completely harmonize the federal-provincial pension investment rules

- relax the quantitative pension investment limits under federal and provincial regulations
  - develop clear qualitative regulatory guidelines on prudent investment in rental housing
- amend restrictions under the *Income Tax Act* to:
  - permit RRSPs to hold direct passive rental housing investments and interests in real estate investment corporations (REICs), and new partnership and pooled trust vehicles
  - develop new partnership vehicles for RPP rental housing investments that:
    - are exclusively for domestic rental housing investments
    - are not treated as foreign property
    - permit greater participation in management by limited partners
  - clarify acceptable joint venture arrangements for RPPs in rental housing
  - permit REICs to hold idle land and to participate in developing properties
  - develop new pooled trust investment vehicles for RPP rental housing investments that are
    - non-taxable
    - able to accumulate earnings
    - open-ended
    - exclusively for domestic investments, and
    - exempt from foreign property rules
  - improve REITs as a vehicle for investment in rental housing by:
    - improving liability protection for investors
    - permitting REITs to function as fully integrated companies able to finance, develop and manage rental housing properties
    - allowing tax-deferred property transfers into REITs, as is currently possible under United States rules
- encourage the rental housing industry to promote to RPP/RRSP investment managers the desirable risk-profile attributes of rental housing that derive from modern portfolio theory
- improve access to specialized investment and property management expertise for RPP/RRSP funds to better enable them to identify, make and manage rental housing investments.

SOMMAIRE EXÉCUTIF

Introduction

Les économies accumulées par les Canadiens dans les régimes de retraite agréés (RRA) et les régimes enregistrés d'épargne-retraite (REER) représentent une importante source possible de placements dans le logement locatif. En 1998, la valeur comptable des RRA totalisait 644 milliards de dollars, alors que celle des REER s'établissait à 241 milliards de dollars. Ensemble, ces économies accumulées représentent environ la moitié de l'avoir net des personnes et entreprises non constituées du Canada. Elles représentent aussi plus du quart de la valeur de tous les biens immobiliers commerciaux et résidentiels (terrains et immeubles) du pays, ou environ la moitié de la valeur de tous les biens immobiliers résidentiels. Toutefois, les preuves statistiques actuelles donnent à penser que l'immobilier constitue une composante relativement mineure des portefeuilles des RRA et des REER au Canada et des régimes de retraite et d'épargne-retraite aux États-Unis.

Programme de recherche

Cette étude avait pour but d'examiner les tendances des placements des RRA et REER dans le logement locatif canadien et les facteurs qui influent sur l'inclusion de tels placements dans les portefeuilles de ces régimes. L'étude utilise une méthodologie intégrée qui comprend un certain nombre d'éléments clés, dont les suivants :

- un examen du cadre législatif et réglementaire;
- une synthèse des documents théoriques et empiriques sur la théorie moderne du portefeuille;
- une enquête auprès des caisses de retraite et gestionnaires de placements pour recueillir des données et déterminer leurs pratiques, perceptions et attitudes actuelles en matière de placement;
- une évaluation comparative des contextes et des résultats canadiens et américains; et
- une analyse quantitative des placements faits par les RRA et les REER dans le logement locatif.

Bien que le nombre de répondants à l'enquête ait été relativement petit par rapport au nombre total d'intervenants de l'industrie, l'auteur croit que les résultats constituent probablement une bonne approximation des pratiques et avis dans le secteur.

Constatations

Les RRA et REER n'investissent pas suffisamment dans le logement locatif

Les preuves présentées dans l'étude semblent confirmer ce que l'on soupçonnait, c'est-à-dire que les RRA et REER sous-investissent actuellement dans le logement locatif. Deux catégories générales de preuves soutiennent cette théorie.

Premièrement, les preuves statistiques présentées dans le rapport indiquent que les RRA et REER détiennent beaucoup moins d'avoirs immobiliers dans leurs portefeuilles que la part de l'avoir national qui est composé de cet actif. L'immobilier représente 27 % de la valeur de l'actif national, mais seulement environ 4 % de l'actif des caisses de retraite et moins de 1 % de l'actif des gestionnaires de placements. Les données révèlent que la proportion des biens immobiliers détenus par les régimes de retraite au Canada est comparable à celle des avoirs immobiliers des caisses américaines. En plus, les résultats de l'enquête montrent que seulement 6 % des caisses de retraite et 3 % des gestionnaires en placements ont des avoirs immobiliers résidentiels locatifs. En plus, l'importance des placements dans le logement locatif est infime : 0,1 % de l'actif dans le cas des caisses de retraite et 0,05 % dans le cas des gestionnaires de placements. Les données montrent en plus que la tendance stagne. Pendant les cinq dernières années, les avoirs immobiliers en tant que pourcentage du total de l'actif des caisses de retraite ont diminué de 0,9 point (tombant de 5,2 % à 4,3 %). Cela représente très approximativement une baisse de 1,1 point des biens immobiliers commerciaux et une hausse de 0,2 point des propriétés résidentielles locatives.

La deuxième catégorie de preuves nous vient des réponses à l'enquête entreprise dans le cadre de l'étude. Les réponses obtenues indiquent que les gestionnaires de caisses de retraite et les entreprises de gestion de placements ont des perceptions très négatives des placements dans le logement locatif.

Ces preuves de sous-investissement *ne donnent pas* à entendre que les RRA et REER devraient, dans les circonstances actuelles, détenir plus de biens immobiliers résidentiels locatifs. Une telle conclusion donnerait à entendre que les gestionnaires de placements ou de portefeuille sont incompétents ou agissent de façon irrationnelle, deux théories improbables étant donné le degré élevé de concurrence dans le secteur financier. Il faut plutôt voir dans les résultats une indication que ces organisations pourraient accroître considérablement leurs placements dans le logement locatif, *en supposant* que les raisons des bas niveaux des placements soient découvertes et qu'au moins une partie des obstacles soit supprimée.

Obstacles aux placements des RRA et REER dans le logement locatif

L'étude relève de nombreux facteurs qui pourraient empêcher les RRA et REER d'investir dans le logement locatif.

Bas taux de rendement

Les données sur le rendement des placements immobiliers au Canada, aux États-Unis et dans divers autres pays indiquent que ces rendements ont toujours été plus bas et plus volatils que ceux des actions et, la plupart du temps, que même ceux des obligations. Les données pour les États-Unis montrent que les rendements des placements dans le logement locatif sont également bas. Bien qu'il n'y ait actuellement aucune preuve directe liée de façon précise au logement locatif

au Canada, les preuves indirectes disponibles donnent à entendre que les rendements pourraient avoir été bas par rapport à ceux d'autres types de placements.

Bien qu'un seul répondant à l'enquête (sur 30) ait mentionné de façon précise les bas rendements comme un obstacle considérable aux placements dans le logement locatif, plusieurs ont observé de façon générale que le rendement prévu ne justifiait pas l'effort nécessaire pour faire de tels placements. Les répondants ont mentionné plusieurs facteurs qui pourraient avoir un rapport avec cet état de fait, dont les suivants :

. la réglementation des loyers;
. les restrictions du zonage et d'autres règlements;
. la concurrence du logement public; et
. les règles de l'impôt sur le revenu qui découragent le changement de propriété des immeubles existants.

Restrictions réglementaires

L'étude cerne plusieurs restrictions réglementaires qui pourraient faire obstacle à l'investissement accru des RRA et REER dans le logement locatif. Premièrement, environ 90 % des caisses de retraite au Canada sont réglementées par les provinces (les autres sont réglementées par le gouvernement fédéral) et les règles régissant les placements des caisses de retraite ne sont toujours pas harmonisées entre les provinces à l'est de l'Ontario. Cela complique inutilement le contexte de l'investissement dans le logement locatif pour les caisses de retraite.

Deuxièmement, bien que les organismes fédéraux et provinciaux chargés de la réglementation des régimes de retraite aient récemment adopté une approche de «gestion prudente de portefeuille» pour la gestion des régimes de retraite, il existe encore des restrictions quantitatives et qualitatives des placements dans le logement locatif que peuvent faire les gestionnaires des caisses de retraite. Les deux restrictions quantitatives les plus importantes des placements de ce genre sont celles qui limitent le placement d'une caisse dans une seule propriété immobilière à un maximum de 5 % de l'actif total, et le total combiné des propriétés immobilières et minières à un maximum de 25 % de l'actif. Bien que les données et les résultats de l'enquête indiquent que la plupart des caisses sont bien en deçà de ces limites, ces restrictions pourraient néanmoins empêcher les placements puisque même une modeste diversification des propriétés dans les portefeuilles entraînerait le dépassement de ces limites pour un très grand nombre de caisses.

En ce qui a trait aux restrictions qualitatives, les organismes chargés de la réglementation exigent que chaque caisse de retraite élabore un plan d'investissement détaillé qui précise, entre autres, la stratégie de placement de la caisse, les catégories de placements, son approche de la diversification, la composition de l'actif et ses objectifs. Le plan d'investissement doit être compatible avec la philosophie de la gestion prudente de portefeuille, et pourtant, il n'y a pas de directive claire sur la façon dont ce principe s'appliquerait dans le cas des placements dans le logement locatif. Cela pourrait amener les gestionnaires de placements à hésiter à s'aventurer dans le secteur du logement locatif. Cela est encore plus probable du fait que très peu de caisses ont de l'expérience des placements de ce genre. Cela est également probable compte tenu du fait

qu'avant l'adoption de la philosophie de la gestion prudente de portefeuille, les placements immobiliers classés dans la catégorie des placements effectués en vertu de clauses omnibus, combinés à d'autres placements n'entrant dans aucune autre catégorie, ne pouvaient pas dépasser 7 % de l'actif total d'une caisse. Bien que la restriction relative aux clauses omnibus ait été supprimée, elle pourrait demeurer un obstacle psychologique pour les gestionnaires de placements. Une fois que le plan d'investissement a été élaboré, il pourrait avoir tendance à devenir «institutionnalisé», ce qui peut créer des obstacles permanents aux placements dans les logements locatifs.

Les résultats de l'enquête confirment le bien-fondé de ces préoccupations. Plusieurs répondants ont indiqué qu'ils croyaient que les placements dans le logement locatif étaient incompatibles avec la philosophie de la gestion prudente de portefeuille, et plusieurs autres ont mentionné les directives internes de la caisse qui empêchaient les placements de ce genre.

Restrictions relatives à l'impôt sur le revenu

L'auteur a aussi examiné de façon détaillée l'impact du régime fiscal. Généralement, la législation de l'impôt sur le revenu interdit aux REER d'investir directement dans le logement locatif, bien qu'ils puissent détenir des logements de sociétés de placement immobilier (SPI). Dans le cas des RRA, la législation fiscale impose des conditions complexes aux différents instruments qu'une caisse peut utiliser pour investir dans le logement locatif, comme divers types de mécanismes de gestion commune, de sociétés et de partenariats. En plus, certains mécanismes utilisés pour structurer les placements dans le logement locatif ont des interactions complexes avec les règles de l'impôt sur le revenu régissant les biens étrangers, qui limitent les placements étrangers que peut faire un RRA ou un REER à un maximum de 30 % de l'actif de la caisse. Certains mécanismes risquent d'être classés comme des formes de biens étrangers et, par conséquent, de restreindre la précieuse marge de manœuvre offerte par les biens étrangers ou exposer la caisse à des pénalités. Par contre, d'autres arrangements peuvent donner une plus grande marge de manœuvre à une caisse en ce qui concerne les biens étrangers. En général, bien que les caisses de retraite aient un large éventail d'options pour les placements dans le logement locatif, les restrictions de l'impôt sur le revenu créent, pour les caisses de retraite, de nombreux obstacles particuliers qui n'existent pas pour d'autres investisseurs.

Plusieurs répondants à l'enquête ont indiqué que les règlements de l'impôt sur le revenu relatifs aux instruments de placement étaient un obstacle considérable à l'investissement. Il est aussi possible que beaucoup de gestionnaires de caisses de retraite ne connaissent tout simplement pas toutes les complexités de ces règles.

Facteurs liés au choix des composants d'un portefeuille

Dans le cadre de l'étude, l'auteur évalue la manière dont l'approche théorique de la gestion de portefeuille adoptée par les gestionnaires de caisses pourrait influer sur l'attrait d'un élément d'actif comme le logement locatif. Différents cadres insistent sur différentes caractéristiques du rapport risque-avantage des éléments d'actif et sur la façon dont ces caractéristiques interagissent avec celles d'autres éléments d'actif dans un portefeuille. Les principaux modèles de la

documentation théorique moderne dans le domaine des finances qui ont été examinés dans le cadre de l'étude sont :

. les modèles portant sur des actifs particuliers et le modèle de variance moyenne du portefeuille;
. le modèle d'évaluation des actifs financiers (MÉDAF);
. le modèle de la théorie de la détermination des prix des actifs;
. le MÉDAF international; et
. le modèle international de détermination des prix des actifs.

Les réponses obtenues pendant l'enquête indiquent que parmi les dix caisses qui ont répondu à la question sur le modèle ou l'approche qu'elles utilisent :

. 50 % n'utilisent pas un modèle structuré particulier;
. 20 % utilisent une approche fondée sur la variance moyenne du portefeuille;
. 10 % utilisent une approche fondée sur la variance moyenne et les actifs particuliers;
. 10 % utilisent une approche fondée sur les produits dérivés synthétiques, et
. 10 % dépendent d'une analyse fondamentale appliquée à chaque actif.

Ces réponses sont importantes puisqu'elles indiquent que presque aucune des caisses n'utilise officiellement de l'information liée aux profils de risque particuliers d'actifs individuels qui découlent de la théorie moderne de la gestion de portefeuille. Cela pourrait avoir des répercussions négatives considérables sur la demande de placements dans le logement locatif, parce que les analystes et théoriciens font souvent la promotion des biens immobiliers en raison de leurs caractéristiques de risque bêta (notamment en ce qui concerne leurs caractéristiques de couverture du risque d'inflation et leurs faibles corrélations avec le marché des actions). Les effets sur la demande d'actifs peuvent être très importants. La recherche indique que les caisses de retraite dans les Pays-Bas affectent typiquement environ 15 % de leurs portefeuilles aux actifs immobiliers, soit environ quatre fois plus que le niveau historique pour les caisses canadiennes et américaines, principalement parce que les gestionnaires néerlandais insistent davantage sur les caractéristiques de couverture du risque d'inflation des propriétés immobilières.

L'analyse présentée dans le rapport montre que l'utilisation d'instruments dérivés prolifère parmi les gestionnaires de caisses de retraite et de placements, et que cela pourrait aussi avoir un effet négatif sur la demande de placements dans le logement locatif. Les produits dérivés peuvent être utilisés pour bâtir des portefeuilles «sur mesure» comprenant un nombre quasi infini de caractéristiques de risque et de rendement, et ils pourraient être utilisés aux fins de la diversification du portefeuille aux dépens d'actifs comme le logement locatif.

Attitudes négatives des gestionnaires de placements

Les réponses obtenues pendant l'enquête indiquent que les facteurs suivants sont les principales sources d'attitudes négatives à l'égard des placements dans le logement locatif parmi les gestionnaires de placements et de caisses de retraite :

- Considérations internes relatives à la gestion de la caisse (46 % des réponses négatives), y compris les «attitudes générales de la direction», le «manque de compétences pertinentes en placement», les «objectifs et directives de placement de la caisse» et les «considérations en matière de gestion prudente»;
- Caractéristiques des placements dans le logement locatif (36 %), y compris le «manque de liquidité des placements dans le logement locatif», les «frais généraux élevés de gestion» et le «manque d'instruments de placement convenables», les «frais de transaction élevés pour les acquisitions et aliénations», l'«incapacité d'établir avec précision la valeur des avoirs détenus», le «manque d'occasions de placement appropriées», la «concurrence du logement subventionné par les gouvernements», les «coûts d'entretien élevés», les «bas taux de rendement», le «manque d'intérêt» et l'«absence de marché»;
- Restrictions législatives et réglementaires (18 %), y compris la «réglementation des loyers», les «autres lois ou règlements sur les rapports entre propriétaires-bailleurs et locataires», la «*Loi sur les normes de prestation de pension* fédérale ou la législation provinciale équivalente», les «règlements fédéraux ou provinciaux régissant les RRA/REER», les «autres règles fiscales touchant les placements admissibles» et les «règlements et règles de zonage».

Les gestionnaires se sont également dit préoccupés des aspects négatifs possibles liés à de tels placements «sociaux», y compris les conflits entre propriétaires-bailleurs et locataires et l'expulsion des locataires. Les avis exprimés montrent que, de façon typique, les placements dans le logement locatif ne font pas normalement partie des choix de placements faits ou envisagés par les caisses.

Suggestions pour améliorer le contexte de l'investissement

L'auteur de l'étude fait plusieurs suggestions qui pourraient encourager les placements dans le logement locatif par les RRA et REER. Toutefois, il fait la mise en garde suivante : bien que ces mesures puissent améliorer le contexte de l'investissement, les connaissances concernant l'importance relative des divers obstacles sont insuffisantes pour prédire quel en serait le résultat au niveau de l'accroissement des placements, de la disponibilité de fonds pour le logement locatif ou du niveau des loyers. Voici les principales suggestions :

- déterminer si les taux de rendement des logements locatifs sont bas, comme le sont ceux des propriétés immobilières et, dans l'affirmative, prendre les mesures nécessaires pour cerner et éliminer les facteurs contributifs
- améliorer le cadre réglementaire. Par exemple :
  - harmoniser complètement les règles fédérales et provinciales sur les placements des régimes de retraite
  - assouplir les limites quantitatives imposées par les règlements fédéraux et provinciaux aux placements des régimes de retraite
  - établir des directives réglementaires qualitatives claires sur les placements prudents dans le logement locatif
- modifier les restrictions en vertu de la *Loi de l'impôt sur le revenu* de manière à :

- o permettre aux REER de détenir des placements passifs directs dans le logement locatif et des intérêts dans les sociétés de placement immobilier et de nouveaux mécanismes de partenariat et de fiducies en commun
- o mettre au point de nouveaux instruments de partenariat pour les placements des RRA dans le logement locatif qui :
  - soient destinés exclusivement aux placements dans le logement locatif canadien
  - ne soient pas traités comme des biens étrangers
  - permettent une participation accrue à la gestion par les associés commanditaires
- o clarifier les coentreprises acceptables pour les RRA dans le logement locatif
- o permettre aux SPI de détenir des terres en friche et de participer à l'aménagement immobilier
- o mettre au point de nouveaux instruments de placement dans des fiducies en commun pour les placements de RRA dans le logement locatif, qui soient
  - non imposables
  - autorisés à accumuler des gains
  - ouverts
  - destinés exclusivement aux placements canadiens et
  - exemptés des règles sur les biens étrangers
- o améliorer les SPI en tant qu'instrument de placement dans le logement locatif par les moyens suivants :
  - améliorer la protection des investisseurs en matière de responsabilité
  - permettre aux SPI de fonctionner comme des compagnies entièrement intégrées, capables de financer, d'aménager et de gérer des propriétés résidentielles locatives
  - permettre des transferts de propriété dans les SPI à imposition reportée, comme l'autorisent actuellement les règles américaines

- encourager le secteur du logement locatif à promouvoir, auprès des gestionnaires de placements des RRA et REER, les caractéristiques souhaitables du profil de risque des logements locatifs selon la théorie moderne du portefeuille
- améliorer l'accès des RRA et des REER à des compétences spécialisées en gestion des placements et des propriétés immobilières, afin de leur permettre de mieux repérer, faire et gérer des placements dans le logement locatif.

National Office

700 Montreal Road
Ottawa ON K1A 0P7
Telephone: (613) 748-2000

Bureau national

700 chemin de Montréal
Ottawa ON K1A 0P7
Téléphone : (613) 748-2000

Puisqu'on prévoit une demande restreinte pour ce document de recherche, seul le résumé a été traduit.

La SCHL fera traduire le document si la demande le justifie.

Pour nous aider à déterminer si la demande justifie que ce rapport soit traduit en français, veuillez remplir la partie ci-dessous et la retourner à l'adresse suivante :

Centre canadien de documentation sur l'habitation
Société canadienne d'hypothèques et de logement
700, chemin Montréal, bureau C1-200
Ottawa (Ontario)
K1A 0P7

Titre du rapport: ____

____

Je préférerais que ce rapport soit disponible en français.

NOM ____

ADRESSE____
rue App.

____
ville province Code postal

No de téléphone ( ) ____________

TABLE OF CONTENTS

ABBREVIATIONS i

CHAPTER I: INTRODUCTION 1
- Scope, Objectives and Methodology 1
- Background 2
- Relationship to Earlier CMHC Research 6
- Outline of the Report 6

CHAPTER II: AN OVERVIEW OF PENSIONS AND RRSPs IN CANADA 7
- Introduction 7
- The Major Components of the Canadian Registered Retirement System 7
- Asset Holdings of Registered Pension Plans 11
- Comparison of National and Pension Fund Holdings of Real Estate 15
- Pension Plan Asset Holdings in the U.S. 17
- Conclusions 18

CHAPTER III: THE LEGISLATIVE/REGULATORY ENVIRONMENT 19
- Pension Legislation and Regulations 19
- Tax Legislation and Regulations 28
- Investment Vehicles for RPP and RRSP Investments in Rental Housing 31
- Summary and Conclusions 46

CHAPTER IV: INVESTMENT INSTRUMENTS IN THE U.S. 49
- Introduction 49
- Major Investment Instruments 49
- Conclusions 63

CHAPTER V: MODERN PORTFOLIO THEORY AND RENTAL HOUSING INVESTMENTS 64
- Introduction 64
- The Evolution of Modern Portfolio Theory 64
- Evidence on the Risk-Return Characteristics of Rental Housing Investments 78
- Summary 84

CHAPTER VI: SURVEY RESULTS 87
- Profile of Pension Funds Included in the Survey 87
- Profile of Money Managers Included in the Survey 99
- Survey Responses 101
- Summary 116

CHAPTER VII: ASSESSMENT AND CONCLUSIONS 119
- RPPs/RRSPs Under-invest in Rental Housing 119

Obstacles to RPP/RRSP Investments in Rental Housing 120
What Can be Done to Improve the Investment Environment for Rental Housing 120
Summary 131

APPENDIX A: THE SURVEY QUESTIONNAIRE 133

APPENDIX B: THE SURVEY METHODOLOGY 149

APPENDIX C: LIST OF ORGANIZATIONS THAT WERE SENT THE SURVEY 151

REFERENCES 155

ABBREVIATIONS

ACPM	Association of Canadian Pension Management
APT	Arbitrage pricing theory
CAPM	Capital asset pricing model
CDIC	Canadian Deposit Insurance Corporation
CMHC	Canada Mortgage and Housing Corporation
CML	Capital market line
CPP	Canada pension plan
DownREIT	A type of REIT (U.S.)
DPSP	Deferred profit sharing plan
ERISA	Employee Retirement Income Security Act (U.S.)
GST	Goods and services tax
HST	Harmonized sales tax
IAPT	International arbitrage pricing theory
ICAPM	International capital asset pricing model
ITA	Income Tax Act
LLC	Limited liability company (U.S.)
MBS	Mortgage backed securities
MIC	Mortgage investment corporation
MPT	Modern portfolio theory
MSCI	Morgan Stanley Capital International
NAREIT	National Association of Real Estate Investment Trusts (U.S.)
NCREIF	National Council of Real Estate Investment Fiduciaries (U.S.)
NHA	National Housing Act
OSFI	Office of the Superintendent of Financial Institutions
PBSA	Pension Benefits Standards Act
PBSR	Pension benefits standards regulations
QPP	Quebec pension plan
REIC	Real estate investment corporation
REIT	Real estate investment trust
RPP	Registered pension plan
RRIF	Registered retirement income fund
RRSP	Registered retirement savings plan
S&P	Standard and Poor
SIP&P	Statement of investment policies and procedures
THC	Title holding corporation
TSE	Toronto Stock Exchange
UBTI	Unrelated business tax income (U.S.)
UPREIT	Umbrella partnership REIT (U.S.)

CHAPTER I: INTRODUCTION

A. Scope, Objectives and Methodology

This purpose of this study is to assess whether Canadian registered pension plans (RPPs) and registered retirement savings plans (RRSPs) currently under-invest in rental housing, and whether there are specific obstacles to equity investment and policy options that could potentially increase it. The study uses an integrated methodology that consists of a number of key elements, including:

(a) a thorough review of the legislative and regulatory environment relating to RPP/RRSP equity investments in rental housing;

(b) a synthesis of the theoretical and empirical literature on modern portfolio theory pertinent to the issue;

(c) a survey of pension funds and money managers to collect data and to ascertain their current investment practices and views on rental housing investments;

(d) a comparative assessment of the Canadian/U.S. environments and results; and

(e) a quantitative analysis of rental housing investments by RPPs/RRSPs.

The study is the first integrated study for Canada to assess directly all of the major factors that could potentially affect RPP/RRSP investments in rental housing. The study is intended to add to the information currently available about a potentially important source of funds for rental housing investments. The principal focus of the study is on equity investments or ownership interests, although I also examine debt and hybrid forms of investment. Increased availability of investment funds for rental housing in a variety of effective forms can potentially increase the stock of rental housing, and lower costs and rents.

The specific objectives of the study are to:

(1) describe and quantify in detail current rental housing investments by Canadian RPPs/RRSPs;

(2) analyze whether the following factors create obstacles to investment by Canadian RPPs/RRSPs:

- fund management practices, perceptions or biases
- legislative and regulatory restrictions
- theoretical portfolio choice considerations.

(3) determine if there are any significant differences in kind or in relative magnitude between Canadian and U.S. pension and retirement plan investments in rental housing;

(4) assess whether efforts to increase investment by RPPs and RRSPs are warranted and, if so, the most effective policy changes to achieve this; and

(5) provide estimates of the magnitude of potential achievable increases in investment;

B. Background

The Investment Climate Relating to RPP/RRSP Investments in Rental Housing

Accumulated savings of Canadians in RPPs and RRSPs represent a potentially major source of investment in rental housing. In 1998, RPPs totalled $644 billion in book value (of which $438 billion was in trusteed plans), while RRSPs were $241 billion. Together, this stock of accumulated savings comprises approximately one-half of the net financial wealth of Canadian persons and unincorporated businesses. It is also in excess of one-quarter of the value of all commercial and residential real estate (land and structures) in the country, or about one-half of the value of all residential real estate. Many analysts and researchers have in fact argued that real estate should form a major element in the portfolios of retirement savings plans.[1] Existing statistical evidence for both Canada and the U.S., however, suggests that real estate forms a relatively minor component. The reasons for this are unclear since to date there has been no full analysis of the factors that play a determining role in the real estate portfolio choices of retirement savings plans. This study attempts to at least partly fill this void by examining the factors that affect the inclusion of rental housing investments in retirement savings plan portfolios in Canada. For a number of reasons, such an enquiry is particularly appropriate at this time.

Tightness in the Rental Housing Sector

For one thing, there has been ongoing tightness in the Canadian rental housing market for some time. The latest data show the national vacancy rate to be only 1.6 percent and dropping.[2] The supply of affordable rental housing has not been keeping up with demand (see Gillin, 2000). It seems natural to investigate whether obstacles to RPP/RRSP investments in rental housing might be contributing to this situation by increasing costs of financing and ultimately rents.

---

[1]Bajtelsmit, and Worzla (1995) summarized eleven studies for the U.S./Canada undertaken between 1984 and 1991 that recommended substantial commitments to real estate in institutional portfolios.

[2]*Housing Facts,* Canada Mortgage and Housing Corporation, Volume 5, Number 12, December 8, 2000.

Availability of New Investment Instruments

A second relevant development is that there have also been important changes in the investment environment pertaining to rental housing investments. One aspect of this has been growth in the number and variety of potential real estate investment vehicles in recent years, including the development of various partnerships and corporate pooling vehicles, mortgage-backed securities and a number of trust arrangements, of which the real estate investment trust (REIT) is one obvious example. It seems appropriate to investigate whether these vehicles are adequate or whether they have design characteristics that impede their attractiveness to retirement funds. The precise design of vehicles and instruments can have a substantial effect on the feasibility of particular types of investments to retirement plans (Jog and MacNevin, 1988). Generally speaking, the U.S. is perceived as being more innovative in the design of real estate investment instruments and one element of the study examines whether there are practices in that country that could be adapted to the Canadian situation. I also compare statistical data for Canada and the U.S. to examine if there are differences in the relative attractiveness of rental housing investments between the two countries.

The Legislative and Regulatory Environment

There have also been major changes in the legislative and regulatory environment pertaining to RPP/RRSP investments that could affect the potential attractiveness of rental housing investments. Pension plans in Canada can fall under the regulatory authority of either the federal or the provincial governments. Historically, real estate equity investments by RPPs, were treated as "basket clause" investments under the federal *Pension Benefits Standards Act* and Regulations to the Act (*PBSA/PBSR*) and similar provincial legislation. They therefore were restricted along with other basket clause investments to be not more than 7 percent of the total asset value of a fund.[3] In 1993, the “prudent person portfolio” approach to pension fund management was formally adopted by the federal government and the basket clause category was eliminated. Most provinces, through their corresponding provincial legislation and regulations have also adopted the prudent person portfolio approach, and over recent years most have harmonized their pension investment regulations with those at the federal level.

The prudent person portfolio approach resulted in considerably fewer restrictions on the investment practices of RPPs. Many rules governing permissible investments were eliminated and pension funds were given much more latitude in determining which investments were suitable for their portfolios. The focus shifted from one centred around bureaucratic rules to one relying to a much greater extent on the professional competence and expertise of fund sponsors, managers and advisors. To obtain and maintain registered status, however, funds must still meet

---

[3]Investments that did not qualify under the very stringent pension investment rules could be acquired under the “basket clause” provision. Even many types of share investments had to be restricted to this category; for example, if the corporation had not earned or paid a dividend equivalent to 4% of the company's book value equity in four of the last five years.

rigorous general regulatory standards, including high standards with respect to prudence of investments, actuarial viability, and so on. For one thing, they must develop and abide by a detailed investment plan that specifies the types of investments that will be pursued and rate-of-return targets. The implications of the switch to the prudent person portfolio regulatory approach for RPP investments in rental housing has not been examined in detail in other studies.

In the case of RRSPs, investments must be approved as "qualified investments" under the federal *Income Tax Act* (*ITA*). RPP investments, including equity and ownership interests in real estate, must also satisfy certain conditions under the *ITA*. In the case of RPPs, in addition to requiring adherence to the *PBSA/PBSR* or provincial regulatory legislation, the *ITA* imposes complex conditions on the different arrangements that a fund can utilize to invest in rental housing, such as those through various pooled fund, corporate, and partnership arrangements, and so on.

The foreign property rules in the *ITA* also create complex and opposing influences on the relative attractiveness of rental housing investments. The foreign property limit has been significantly increased in a series of steps from 10 percent to 25 percent for the year 2000 and to 30 percent for 2001. The restriction might make domestic real estate-related investments popular; however, real estate investments can themselves be classified as foreign property if they fail to satisfy fairly intricate tax rules. Certain arrangements can even earn funds extra foreign property room.

Some of the tax issues relating to investments by retirement plans in real estate have been examined in recent years (see, Krasa 1995, Harrison and Krasa 1994, Shafer 1996) and a number have been shown to have a potentially negative effect on the attractiveness of such investments. There has to date, however, been no comprehensive analysis of investment obstacles that can be created by tax rules for rental housing investments. One aspect of this study is to investigate the effects of tax legislation and regulations on the attractiveness of rental housing equity and ownership investments, including their impact within the new regulatory environment applicable to RPPs.

Objectives, Perceptions and Internal Constraints of Fund Managers

The adoption of the "prudent portfolio" approach represented to a significant extent a shift from regulation of pension investments by specific legal rules to regulation by professional discretion, although admittedly still within a fairly tight overall regulatory environment. Many of the former quantitative restrictions on the portfolio choices of fund managers were removed. Within this new environment, a fund's objectives and internal guidelines, as well as the perceptions (whether right or wrong), practices and attitudes of fund managers may be of fundamental importance. These will be reflected in the long-term investment plan developed for the regulatory authorities, which binds the general investment policies of a fund, as well as in the day-to-day investment decisions made by managers.

One key aspect of this study consists of a detailed survey of a large sample of pension funds and money managers to determine the practices that tend to influence investment activities. The survey was designed to shed light on the factors and considerations affecting managers' decisions on whether to invest in rental housing, and to obtain their views on any real or perceived impediments and hindrances. The survey also solicited information on fund managers' views on the investment vehicles and instruments available to them for RPP/RRSP investments. In addition, the survey collected valuable data on the current rental housing investments by funds and on the potential for changes in the level of investment. Existing published data are highly aggregated; they do not permit assessment of the various issues examined by the study.

Potential Theoretical Role for Real Estate Investments in RPP/RSP Portfolios

Theoretical issues relating to portfolio choice can affect the popularity of rental housing investments to retirement savings plans. Modern theories of portfolio management go beyond assessment of the risk and return characteristics of individual investments to consideration of their behaviour in a portfolio setting. Depending on the specific theory of portfolio management one adheres to, this can involve measuring the risk of an asset as a function of its covariability with other investments, with broad market indices or with indicators of macroeconomic performance and market confidence, and then combining assets in portfolios so as to take full advantage of their portfolio risk-return profiles. Optimal portfolio diversification can significantly improve the menu of risk-return choices. It can ensure that for any target rate of return, portfolio risk is less than the average risk of the assets in the portfolio. Alternatively, for any chosen level of portfolio risk, it can ensure that portfolio return is maximized. Research has demonstrated that effective portfolio selection can even increase the maximum return attainable beyond the sum of the returns of the individual assets in the portfolio.

The potential effect of modern portfolio theory on the attractiveness of a particular asset such as rental housing is complicated by the fact that there are various alternative portfolio models. These models approach risk and return from different perspectives and focus on different components of risk. For example, asset-specific mean-variance analysis considers the trade-off between the expected return and the variability of returns for the asset. Mean-variance analysis when extended to a portfolio setting considers the covariability of an asset's returns with those of other assets in the portfolio. Against this, the until recently dominant "capital asset pricing model" (CAPM) approach to portfolio selection assesses the "systematic" risk of an investment (sometimes referred to as non-diversifiable or market risk) as indicated by its "beta" coefficient, which measures the asset's covariability with a broad market index. More recent portfolio theories such as arbitrage pricing theory (APT), the international CAPM (ICAPM) and international APT (IAPT) incorporate other more specific measures of risk. This study examines in detail the theoretical issues relating to modern portfolio theory that could affect the attractiveness of rental housing investments to RPPs/RRSPs. This includes synthesis of modern theoretical and empirical literature relating to different types of risk. The study also assess evidence on risk-adjusted returns to rental housing investments for Canada and the U.S.

C. Relationship to Earlier CMHC Research

This study relates to and extends earlier research sponsored by CMHC. Wellman (1999) was the first empirical study in Canada to explore whether the rapid growth of REITs in the U.S. is likely to be followed in Canada. The report concluded that use of the REIT structure in the U.S. has enabled real estate operators and developers to achieve greater access to capital, and lower cost financing for acquisition, construction and renovation. The study found, however, that the potential for REITs in Canada is limited by legislative and regulatory factors, most particularly the inability to effect a tax deferred exchange of trust units for property, and impediments to becoming fully fledged developers. The Wellman study emphasizes the importance of the availability of appropriate investment vehicles.

A second recent study (Clayton Research Associates, *et al*, 1999) provided a very useful overview of the private rental housing investment sector in Canada. The scope extended to small investors, public real estate companies, pension funds, REITs and other medium and large investors. As regards pension funds specifically, the study found that such funds have only begun to get involved in real estate. Currently, pension funds own less than 1% of the private rental stock although there is considerable interest in expanding holdings. The study concludes that opportunities may be emerging for developers to build properties for sale to pension fund investors. The study recommended follow-up research because "...our understanding could be enriched by a more comprehensive survey of investors."

This study complements these earlier studies by looking in much greater detail at data on RPP/RRSP rental housing investments and returns, as well as the theoretical, practical and legislative/regulatory factors affecting such investments.

D. Outline of the Report

The report is structured as follows. The next chapter provides a brief description of the RPP/RRSP environment in Canada and situates retirement savings within the context of the overall Canadian financial sector. Chapter III examines the legislative and regulatory environment for RPP/RRSP investments in rental housing. Chapter IV examines investment vehicles and instruments in the U.S. Chapter V analyzes theoretical portfolio choice issues that might affect the potential role for rental housing investments and examines empirical data relevant to this issues. Chapter VI presents and assesses the results from the surveys of pension funds and independent money managers. That chapter examines evidence on fund management practices, perceptions and attitudes, and current obstacles to investment identified by managers in the surveys. It also presents empirical data on portfolio structures. Chapter VII of the report contains concluding comments and policy suggestions; it also identifies areas where further research is warranted. There are three appendices at the end of the report. Appendix A contains the survey questionnaire. Appendix B describes the survey methodology. Finally, Appendix C provides of list of the pension funds and money managers to whom the survey was sent.

CHAPTER II: AN OVERVIEW OF PENSIONS AND RRSPs IN CANADA

A. Introduction

This chapter provides a brief statistical overview of RPPs and RRSPs in Canada and a brief comparison of pension investments in Canada and the U.S. It examines the size and growth of retirement funds and broad information on their asset holdings that is available from published data sources.

B. The Major Components of the Canadian Registered Retirement System

The Canadian retirement system consists of the following major components:

(a) general social pension plans, which consist of the Canada Pension Plan (CPP) and the Quebec Pension Plan (QPP);

(b) registered pension plans (RPPs), which consist of those funded from general consolidated government funds or under government annuity and those funded, either with public or private sector sponsors, under a trust or insurance company arrangement; and

(c) registered retirement savings plans (RRSPs).

Table II.1 below shows the absolute and relative sizes of each of these components over the 13-year period from 1986 to 1998. In 1998, RPPs account for over two-thirds of the total and have increased marginally in importance over the twelve-year period. RRSPs have grown significantly in relative importance from 18 percent to 26 percent of the total. There has been a corresponding decline in the importance of the CPP/QPP component from 14 percent to only 5 percent. Measured at book value in 1998, RPPs totalled $644 billion in value (of which $438 billion was in trusteed plans), while RRSPs were $241 billion. Thus, combined RPP/RRSP assets were $885 billion.

TABLE II.1
ACCUMULATED ASSETS IN RETIREMENT INCOME PROGRAMS
(At book value where possible)
1986-1998

	1986		1988		1990		1992		1994		1996		1998	
	$ bil.	%	$ bil.	%	$ bil.	%	$ bil.	%	$ bil.	%	$ bil.	%	$ bil.	%
Public Plans (CPP/QPP)	**46.0**	**14.4**	**50.8**	**12.6**	**55.0**	**11.2**	**56.9**	**9.7**	**54.4**	**7.9**	**51.6**	**6.4**	**49.4**	**5.3**
RPPs														
- Trust agreement	125.8	39.3	156.1	38.8	198.1	40.5	235.4	40.0	290.8	42.1	351.1	43.7	438.3	46.9
- Government consolidated revenue funds	64.2	20.1	86.3	21.5	95.0	19.4	112.8	19.2	121.6	17.6	137.0	17.0	160.7	17.2
- Insurance company	25.0	7.8	27.7	6.9	30.6	6.2	35.6	6.1	39.9	5.8	39.6	4.9	45.1	4.8
- Government annuity	.7	.2	.6	.2	.6	.1	.5	.1	.5	.1	.4	0.0	.4	0.0
Total RPP	**215.7**	**67.4**	**270.8**	**67.3**	**324.2**	**66.3**	**384.3**	**65.3**	**452.7**	**65.5**	**528.1**	**65.7**	**644.4**	**68.9**
RRSP	**58.4**	**18.2**	**80.5**	**20.0**	**110.1**	**22.5**	**147.3**	**25.0**	**184.0**	**26.6**	**223.8**	**27.9**	**241.2**	**25.8**
GRAND TOTAL	**320.0**	**100.0**	**402.1**	**100.0**	**489.2**	**100.0**	**588.5**	**100.0**	**691.1**	**100.0**	**803.5**	**100.0**	**935.0**	**100.0**

SOURCE: *Trusteed Pension Funds, Financial Statistics, 1998*, Statistics Canada 74-201, Table A.

From table II.2, it can be seen that there has been a consolidation in RPPs, with the trend being towards fewer but larger plans. Over the 13-year period (1986-1998), the number of plans declined significantly from about 21 thousand to about 15 thousand. The number of individuals covered by RPPs increased over the same period by 9 percent from 4.7 million to 5.1 million. The growing importance of RRSPs is illustrated again from data in table II.3. The number of contributors to RRSPs over the 13-year period 1985 to 1997 more than doubled, from 2,883 to 6,159. The average contribution also increased significantly from under $3,000 to about $4,456, a reflection at least in part no doubt of the increased contribution room permitted under income tax law.

TABLE II.2
NUMBER OF RPPs AND MEMBERS
1986-1998

	1986	1988	1990	1992	1994	1996	1998
Number of Plans	21,094	21,239	19,956	18,028	15,749	15,429	15,214
Number of Members	4,668,381	4,845,107	5,109,363	5,318,090	5,214,647	5,149,912	5,088,455

SOURCE: *Pension Plans in Canada, January 1998*, Statistics Canada 74-401, Table 8.

TABLE II.3
NUMBER OF RRSP CONTRIBUTORS AND AVERAGE CONTRIBUTION
1985-1997

	1985	1987	1989	1991	1993	1995	1997
Number of Contributors (000)	2,883	3,451	4,137	4,699	5,110	5,683	6,159
Average Contribution ($)	2,928	3,335	3,224	3,199	3,753	4,047	4,456

SOURCE: *Pension Plans in Canada, January 1998*, Statistics Canada 74-401, Table 1.

C. Asset Holdings of Registered Pension Plans

Tables II.4 and II.5 report information on the asset holdings of Canadian RPPs. Table II.4 shows the growth in very broad categories of assets held in the portfolios of funds between 1986 and 1998. In 1998, real estate (including lease backs)[4] accounted for $12.3 billion or 2.4 percent of total assets; mortgages accounted for an additional $5.8 billion and 1.1 percent. Unfortunately, the data do not permit a breakout of real estate and mortgages also held under pooled fund arrangements for the full period. However, such data are available for the years 1996 and 1998. See Table II.5.) Over the twelve-year period, there has been a slight decline in real estate holdings, with a peak of 3.4 percent of total assets achieved in 1990. The longer-term trend is less pessimistic; if one extends the data set back to 1981, for example, real estate was less than 1.5 percent of total asset value. In terms of nominal dollar investments, real estate grew three-fold from about $4 billion to about $12 billion between 1986 and 1998. Mortgages have declined dramatically in importance. Nominal mortgage holdings fell from about $7 billion in 1986 to about $6 billion in 1998; or from just under 5 percent of total assets to just over 1 percent. The huge growth in the popularity of pooled investment vehicles is notable as well. Over the twelve-year period, they increased from about 6 percent of total assets to about 25 percent.

---

[4]The term "real estate" is not defined precisely in the Statistics Canada pension fund survey. Statistics Canada provided the author with the following explanation: "We do not offer a hard and fast definition for "real estate." When the term is used to denote a class of assets, as it is in our TPF (trusteed pension fund) questionnaire, those accountants filling out our form would use the definition of real estate as it is generally accepted in accounting practice. This would mean commercial and residential properties, such as houses, apartments, malls, shopping centres, etc., including petroleum and natural gas properties." A Statistics Canada official informed this author that the real estate category would certainly only include equity and ownership interests.

TABLE II.4
DISTRIBUTION OF ASSETS HELD BY RPP FUNDS, 1986-98
(Size Based on Gross Market Value of Assets)

	1986		1988		1990		1992		1994		1996		1998	
	$ bil.	%	$ bil.	%	$ bil.	%	$ bil.	%	$ bil.	%	$ bil.	%	$ bil.	%
Pooled Vehicles	8.1	5.7	9.3	5.6	11.2	5.5	16.9	6.7	40.1	12.9	83.3	20.0	124.5	24.5
Bonds	63.5	44.4	71.0	42.5	93.3	45.2	110.8	44.2	114.9	37.2	128.9	30.9	158.4	31.1
Stocks	44.6	31.3	51.2	30.7	59.4	29.1	84.7	33.8	110.5	35.7	158.7	38.1	172.2	33.9
Mortgages	6.9	4.8	7.6	4.5	7.9	3.9	7.9	3.2	7.4	2.4	7.1	1.7	5.8	1.1
Real Estate and Lease Backs	3.9	2.7	4.6	2.8	6.9	3.4	8.1	3.2	9.3	3.0	10.1	2.4	12.3	2.4
Other	15.9	11.1	23.2	13.9	26.2	12.9	22.0	8.8	27.3	8.8	28.5	6.9	35.3	6.9
GROSS ASSETS	**142.9**	**100.0**	**166.9**	**100.0**	**204.0**	**100.0**	**250.4**	**100.0**	**309.4**	**100.0**	**416.6**	**100.0**	**508.5**	**100.0**

SOURCE: *Trusteed Pension Funds, Financial Statistics, 1998* (and 1996 for the 1986 data), Statistics Canada 74-201, Table D.
Note: Data relates only to RPPs with greater than $5 million in gross assets.

Table II.5 reports portfolio holdings of RPPs by size of fund, measured in terms of the gross market value of assets, for the two years 1996 and 1998. Real estate generally increases in importance as the size of the RPP increases. In 1998, the percentage of assets in real estate is 11 times greater for the largest funds ($10 billion in assets and over) in comparison to the smallest funds ($5 million to $25 million in assets). In 1998, mortgages, mortgage funds and real estate funds accounted, respectively, for 1.1%, 0.4 and 0.6% of assets. Generally speaking, these assets are more popular with larger funds, although the trend is less marked than in the case of direct real estate holdings. The table also shows that, while not an entirely consistent trend, pooling vehicles are generally more popular with smaller funds. This no doubt reflects the greater reliance by smaller funds on externally managed indirect investment vehicles because of significant economies of scale over managing individual investments directly.

TABLE II.5
PERCENTAGE DISTRIBUTION OF ASSETS HELD BY RPP FUNDS BY ASSET SIZE-GROUP, 1996 and 1998
(Size Based on Gross Market Value of Assets)

	(Percent)															
	TOTAL		$5 mil. to under $25 mil.		$25 mil. to under $100 mil.		$100 mil. to under $500 mil.		$500 mil. to under $1 bil.		$1 bil to under $5 bil.		$5 bil. to under $10 bil		$10 bil and over	
	1996	1998	1996	1998	1996	1998	1996	1998	1996	1998	1996	1998	1996	1998	1996	1998
Pooled, mutual and investment funds	**20.0**	**24.5**	**55.7**	**56.3**	**31.4**	**38.3**	**26.6**	**34.0**	**22.0**	**32.1**	**17.0**	**26.1**	**35.2**	**44.2**	**.9**	**12.2**
- mortgage fund	.3	.4	1.0	.8	.7	.5	.4	.3	.5	.5	.3	.3	.5	1.3	0	.3
- real estate fund	.5	.6	.2	.1	.2	.3	.5	.3	.7	.8	.4	.4	1.4	1.8	0	.5
Equities	**38.1**	**33.9**	**17.2**	**16.0**	**30.9**	**26.4**	**34.1**	**29.0**	**36.7**	**29.8**	**40.9**	**35.1**	**30.1**	**26.8**	**47.7**	**38.3**
Bonds	**30.9**	**31.1**	**17.9**	**17.7**	**29.2**	**28.0**	**31.4**	**29.8**	**31.4**	**30.5**	**31.1**	**31.4**	**25.8**	**22.6**	**35.9**	**34.3**
Mortgages	**1.7**	**1.1**	**.5**	**.6**	**.6**	**.4**	**.7**	**.5**	**1.7**	**1.3**	**1.9**	**1.0**	**1.8**	**1.5**	**2.2**	**1.3**
- residential	.8	.5	.3	.3	.2	.2	.3	.2	1.0	.7	1.3	.7	.8	.2	.6	.6
- non-residential	.9	.6	.2	.3	.4	.3	.3	.3	.7	.6	.7	.3	1.0	1.3	1.7	.8
Real estate	**2.4**	**2.4**	**.3**	**.4**	**.3**	**.2**	**.5**	**.5**	**1.3**	**1.1**	**2.1**	**1.5**	**2.2**	**1.1**	**4.9**	**4.4**
Cash, etc.	**5.3**	**4.8**	**7.1**	**8.2**	**6.1**	**5.3**	**5.7**	**5.5**	**6.2**	**4.3**	**6.0**	**4.1**	**3.5**	**3.0**	**5.4**	**5.5**
Miscellaneous	**1.6**	**2.1**	**1.4**	**.9**	**1.5**	**1.4**	**.9**	**.9**	**.9**	**.9**	**1.0**	**.8**	**1.3**	**.7**	**2.9**	**4.0**
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

SOURCE: *Trusteed Pension Funds, Financial Statistics*, 1996 and 1998, Statistics Canada 74-201, Table 9.
Note: Data relates only to RPPs with greater than $5 million in gross assets.

D. Comparison of National and Pension Fund Holdings of Real Estate

Table II.6, which is derived from national balance sheet data, provides a crude comparison of national real estate holdings with those of pension funds. In 1999, the latest year available, residential and non-residential structures (excluding land) each comprised 9 percent of total national assets; land comprised a further 8 percent of national assets. In total, these three categories of assets were 27 percent of total assets. The situation is markedly different in the case of pension funds. In 1999, they held virtually no residential real estate and only 2.2 percent of their assets consisted of non-residential real estate. Land accounted for a further .6 percent of total asset holdings. In total, land and real estate comprised only 2.8 percent of pension assets–less than one-nineth the percentage for the nation as a whole. As well, over the ten-year period, land and real estate declined steadily though not dramatically in importance at both the national level and for pension funds. In the national balance sheet, these assets fell from 32 percent to 27 percent of total assets. For pension funds, they fell from 3.2 to 2.8 percent.

TABLE II.6
THE IMPORTANCE OF STRUCTURES AND LAND
NATIONAL ASSETS VERSUS PENSION FUNDS

	National Balance Sheet						Pension Funds					
	1990		1995		1999		1990		1995		1999	
	$ bil.	%	$ bil.	%	$ bil.	%	$ bil.	%	$ bil.	%	$ bil.	%
Residential Structures	609.2	10.5	757.1	10.1	874.4	9.3	0	0	0	0	0	0
Non-residential Structures	699.4	12.1	760.8	10.2	839.7	8.9	5.0	2.5	8.3	2.7	10.5	2.3
Land	541.4	9.3	675.4	9.0	787.6	8.3	1.3	.7	2.1	.7	2.7	.6
Total Structures and Land	1,850.1	31.9	2,193.3	29.3	2,501.7	26.5	6.3	3.2	10.4	3.3	13.2	2.8
TOTAL ASSETS	**5,794.4**	**100.0**	**7,490.0**	**100.0**	**9,433.1**	**100.0**	**197.9**	**100.0**	**313.1**	**100.0**	**466.0**	**100.0**

SOURCE: CANSIM, Statistics Canada, matrices 771 and 793.
Note: Land includes, residential, non-residential and agricultural land. Non-residential land includes only land surrounding non-residential structures (largely commercial land).

E. Pension Plan Asset Holdings in the U.S.

Table II.7 reports data on real estate holdings for the largest 1,000 pension funds in the U.S. for the years 1998 and 1999. Real estate holdings are a bit higher in that country in comparison to Canada, but not dramatically so. For the largest 1,000 funds combined, real estate accounted for 3.3 percent of total assets in 1998 and 3.0 percent in 1999. It is likely that this small difference between Canada and the U.S. is at least partly explained by the exclusion of smaller funds from the U.S. sample since such funds generally hold little real estate. Mortgages accounted for an additional .6 percent in 1998 and .9 percent in 1999. The table shows that real estate holdings are only marginally higher for very large U.S. funds. For the largest 200 funds, real estate was 3.4 percent of total assets in 1998 and 3.2 percent in 1999. Mortgages accounted for an additional .6 percent and 1.0 percent of total assets for 1998 and 1999 respectively.

TABLE II.7
THE ASSET MIX FOR LARGEST U.S. PENSION FUNDS: 1998 AND 1999 (Percent)

	Largest 1000 Funds		**Largest 200 Funds**	
Asset Category	**1998**	**1999**	**1998**	**1999**
Domestic Equity	46.2	47.6	45.6	47.2
Domestic Fixed Income	30.5	27.5	30.6	27.1
International Equity	11.8	13.8	12.1	14.2
International Fixed Income	2.0	1.9	2.1	1.9
Cash	2.3	1.8	2.2	1.8
Private Equity	1.9	2.5	2.3	2.8
Real Estate	3.3	3.0	3.4	3.2
Mortgages	.6	.9	.6	1.0
Other	1.4	1.0	1.1	.8
TOTAL ASSETS	**100**	**100**	**100**	**100**

Source: Compiled from *Pension and Investments*, Jan. 24, 2000, http://www.pionline.com.
Notes: (1) The data includes only defined benefit plans because real estate is not reported separately for defined contribution plans. Moreover, other asset categories are defined differently for the two types of plans so that data cannot be combined. In 1999, defined benefit plans accounted for 81 percent of total asset value of all plans.

F. Conclusions

RPPs/RRSPs are a large and growing source of potential funds for rental housing investment. Existing published data indicate, however, that real estate is not a popular investment for RPPs/RRSPs. Moreover, the popularity of real estate investments has declined noticeably in recent years. This is true for both direct holdings and for mortgages. While admittedly a very crude comparison, national balance sheet data indicate that the percentage real estate holdings of pension funds are small in comparison to the overall share of this asset in national wealth. Pooled fund investments have increased substantially in popularity over recent years and are generally more popular with smaller funds. The situation between Canada and the U.S. appears to be very similar. Real estate accounts for only a marginally higher percentage of total asset value for pension funds in the U.S. than in Canada, and even this small difference may be partly explained by sample bias in the U.S. data which excludes information on smaller funds that generally hold little real estate.

CHAPTER III: THE LEGISLATIVE/REGULATORY ENVIRONMENT

A. Pension Legislation and Regulations

Background

Pension plans in Canada may fall under either federal or any of nine provincial regulatory authorities. Prince Edward Island does not, as of January 2001, have pension legislation in place. In principle, under section 92(13) of the Constitution Act, which specifies the general constitutional responsibility of the provinces over property and civil rights, provinces have the authority to regulate pension plans (Benoit, 1998). However, responsibility for pension plans sponsored by employers in federally regulated industries, such as banking, interprovincial transportation, telecommunications, and undertakings outside the legislative authority of the provinces, remain under the jurisdiction of the federal government. The latter category includes public and private undertakings in the North (i.e.,the Yukon, Northwest Territories and Nunavut) and those of Native organizations.

All private pension plans in Canada, must be registered with the appropriate federal or provincial pension supervisory agency. Pension plans are registered in the jurisdiction in which the largest number of members is employed. They are governed, however, in accordance with the rules of the province in which each member is employed, with administrative responsibility assumed by the regulatory authority in the province of registration under reciprocal agreements and some administrative accommodation (see Association of Canadian Pension Management, January, 2000).

In order to qualify for the exemptions and deductions provided under federal and provincial tax legislation, all employer-sponsored pension plans and all RRSPs must also be registered with the federal taxation authority. Plans so registered qualify for tax exempt status on income and capital gains of the fund; moreover a deduction from income is permitted by employees and employers in respect of their contributions to the plan, up to permissible limits.

The remainder of this chapter examines the legislative and regulatory rules for RPPs and RRSPs. It first discusses the federal and provincial legislation regulating RPPs, and then the income tax rules applying to RPPs and RRSPs.

Federally Regulated Plans

Federal Regulatory and Legislative Authority

Private pension plans that fall under federal jurisdiction are subject to the *Pension Benefits Standards Act* (*PBSA*) and the *Regulations* to the Act (*PBSR*). The *PBSA* and *PBSR* are administered by the Private Pension Plans Division of the Office of the Superintendent of Financial Institutions (OSFI). The OSFI has the responsibility to safeguard members' benefits

from undue loss. The *PBSA* sets minimum standards for funding, investments, membership eligibility, vesting, locking-in, portability of benefits, death benefits, and members' rights to information.

Relatively few funds fall under federal jurisdiction. As at March 31, 1999, there were only 1,161 pension plans registered under the *PBSA* (compared to the more than 15,000 RPPs in total from Table II.2) and these covered only 495,186 employees. The total market value of assets of federally regulated plans was only about $74 billion (Office of the Superintendent of Financial Institutions, 1999). While directly comparable numbers for provincially regulated plans are not available, aggregate data from the preceding chapter indicate that, roughly speaking, federally-regulated plans constitute only about one-tenth of the total number of registered plans and employees covered by such plans, and the total value of pension assets.

The Federal Regulatory Standards

The *PBSA* prescribes the general standard of care for the administration of federally regulated pension plans, although trust law also imposes fiduciary duties on administrators. In 1993, federal authorities formally adopted the the "prudent person portfolio" approach to administering pension plans, first publically endorsed in the mid-eighties. In confirming the appropriateness of the switch, the OSFI has recently stated that "...detailed regulation of the administration of pension plans...is ineffective and counterproductive." (OSFI, May1, 1998.) The view reached was that in regulating plans, it was best to rely on the stated objectives of the plan and the general standard of care required of administrators in achieving those objectives.

Under the *PBSA/PBSR*, each pension plan must have an administrator who performs two key roles: a "trustee" role which encompasses setting overall direction and providing supervision, and a "manager" role in carrying out the day-to-day administration. The management functions but not the supervisory function can be delegated and the two roles should be kept as separated as possible.

Subsection 8(4.1) of the *PBSA* describes the "prudent person portfolio approach", which has become the governing philosophy underlying regulation. It requires that the plan administrator invest the assets of the fund in accordance with the *PBSR* and in a way that a reasonable and prudent person would apply to the investment portfolio of a pension fund. Subsection 8(5) notches up the standard of prudence required of professional administrators by specifying that it should be of a standard consistent with the administrators' business or professional background or qualifications. The PBSA/PBSR rules determine eligible investments for RPPs and many of the rules could affect, either directly or indirectly, the ability or willingness of funds to invest in rental housing.

PBSA and *PBSR* Investment Rules

There are two main components of the *PBSA* and *PBSR* investment rules that could affect rental housing investments. The first are the detailed rules that restrict certain types of investments and the second is the requirement that a fund develop a formal investment policy document that is consistent with the prudent person approach.

The Formal Investment Rules

Sections 6 and 7 of the *PBSR* require that the assets of an RPP be invested in accordance with Schedule III of the *PBSR* and held in trust, or with a custodian or in the name of the Canadian Depository or its nominee, for the benefit of the plan. Schedule III of the *PBSR* sets out the prescribed investment and lending limits.

Sections 9, 10 and 11 of Schedule III to the *PBSR* relate directly or indirectly to real estate investments. The "10 percent" rule in subsection 9(1) specifies that not more than 10 per cent of the total book value of the plan's assets are to be lent to or invested in:

(a) any one person;
(b) two or more associated persons; or
(c) two or more affiliated corporations.

Subsection 9(3) modifies this, however, by stating that the restriction does not apply in the case of investments in general life insurance funds; mutual or pooled funds that meet the investment rules of Schedule III; government guaranteed securities; broad-based indexes; or an investment corporation, real estate corporation or resource corporation. Subsection 1(e) defines a real estate corporation to be "...a corporation incorporated to acquire, hold, maintain, improve, lease or manage real property other than real property that yields petroleum or natural gas." Paragraph 9(3)(a) of Schedule III also exempts a government guaranteed fund composed of mortgage-backed securities from the 10 percent restriction (see below).

Subsection 10(1) of the Schedule III to the *PBSR* limits investment in any one real property or Canadian resource property to not more than 5 per cent of the book value of the plan's assets at the time the investment was made. Further restrictions in that subsection limit the book value of all Canadian resource properties to not more than 15 percent of the book value of the plan's assets, and the aggregate book value of all investments in real property and Canadian resource properties combined to be no more than 25 percent of asset value. Subsection 10(2) further clarifies that subdivided real property under the same beneficial ownership or multiple properties that are acquired for consolidation, are treated for purposes of the limitations as one parcel.

Subsection 11(1) limits investment of a fund in terms of the degree of control it may exercise. Specifically, a fund may not own more than 30 percent of the voting shares of a corporation,

except in the case of a real estate corporation, a resource corporation, or an investment corporation.

Table III.1 below summarizes the preceding investment rules plus some additional general arm's length and foreign property restrictions. (The latter are in the *Income Tax Act* (*ITA*) and are discussed in detail later in this chapter.)

TABLE III.1
PRESCRIBED INVESTMENT AND LENDING LIMITS FOR PENSION PLANS THAT ARE SUBJECT TO THE *PBSA*

Type of Asset	Limits/Restrictions	Exceptions	Reference Sec. *PBSR*, Schedule III
Loans to or investments in: a) a single person; b) two or more associated persons; or c) two or more affiliated corporations	10 % of the total book value of the plan's assets.	Funds on deposit with a financial institution that are insured by CDIC, CompCorp, or similar provincial bodies; Segregated or mutual or pooled funds that meet the requirements of Schedule III; Unallocated general fund of a life insurance company operating in Canada; An investment corporation, real estate corporation, resource corporation; Securities of, or guaranteed by: the Government of Canada, a province or agency; Fund of MBSs guaranteed by the Government of Canada, a province or agency; Fund that replicates a widely recognized index.	Section 9
Real property and Canadian resource property: a) Parcel of real property; b)Total of Canadian resource properties c) Aggregate of all properties	a) 5% of book value of the plan's assets; b) 15% of book value of the plan's assets; c) 25% of book value of the plan's assets.		Section 10
Securities: To which are attached voting rights to elect directors of a corporation	30% of the corporation's securities issued with voting rights.	Real estate corporation; resource corporation and investment corporation.	Section 11
Related party: Loans to or securities of	Prohibited	Securities acquired at a public exchange. Investments not material to the pension plan.	Sections 16 and 17
Foreign investments	25% of book value of the plan's assets at date of purchase		*Income Tax Act*

SOURCE: Derived from *Guideline for the Development of Investment Policies and Procedures for Federally Regulated Pension Plans*, Office of the Superintendent of Financial Institutions Canada, April 2000.

The Fund Investment Plan and the "Prudent Person Philosophy

The *PBSA* and *PBSR* require that the administrator of a federally regulated plan establish a written Statement of Investment Policies and Procedures (SIP&P). The SIP&P must be based on the underlying philosophy of the "prudent person portfolio approach." The SIP&P performs a number of valuable functions, including, communicating the investment philosophy, objectives and attitude toward risk of the fund from the plan administrator to the pension manager and those assigned responsibility for evaluating the performance of the fund. Section 7.1 of the *PBSR* states that the SIP&P must specifically address the following elements:

(a) categories of investments and loans, including derivatives, options and futures;
(b) diversification of the investment portfolio;
(c) asset mix and rate of return expectations;
(d) liquidity of investments;
(e) lending of cash and securities;
(f) retention or delegation of voting rights attached to investments;
(g) valuation of investments not regularly traded at a public exchange; and
(h) related party transactions (OSFI, April 2000).

The formal investment restrictions specified in Schedule III of the *PBSR* and described above are therefore only minimal conditions that must be met by all plans. More generally, the SIP&P for a fund must also reflect the general prudent person portfolio philosophy. The SIP&P must be carefully developed bearing in mind the evolution of the plan's financial obligations over time and the appropriate mix of assets of different expected returns and risk characteristics required to meet these obligations. A fund administrator is expected to set appropriate limits on the plan's exposure to specific and market risk in the SIP&P that is consistent with the current and future financial requirements of the plan. To a certain extent, risk can be offset by portfolio diversification, however, the appropriate form of diversification for any particular plan will depend on its characteristics, including the size of its assets.

Generally speaking, the prudent person portfolio approach to plan administration would require greater diversification than is mandated by Schedule III of the *PBSR*, including with respect to real estate. For example, there is a five per cent parcel limit for real estate but this only reduces the risk associated with a single asset. The prudent person portfolio philosophy would also require that the fund managers address correlations in the risks associated with different real estate properties of the same type, including that there be adequate diversity in holdings with respect to location (i.e., city or even province) and with respect to type of real estate (i.e., residential, commercial or industrial) (OSFI, April 2000). The treatment of risk in modern portfolio theory extends the fiduciary requirements far beyond property diversification to analysis of the correlations between the returns from rental housing investments with those of other assets in the portfolio, the general market and various other factors. In chapter V, I analyze in detail the implications of modern portfolio theory for rental housing investments.

While it is not necessary for the plan administrator to file the SIP&P with the OSFI, it must submit it to the plan actuary and pension council (subsection 7.1(3) of the *PBSR*) and it must be available for assessment by the OSFI upon request. The plan administrator is also expected to maintain detailed information on the investment portfolio so that it can be compared with the SIP&P. Section 7.2 of the *PBSR* specifically requires that the plan administrator review the SIP&P at least annually.

The Restrictiveness of the Investment Plan

According to federal regulatory authorities, the SIP&P should identify both the categories of authorized investments and the acceptable proportions for each category. The SIP&P is not etched in stone and indeed as noted, federal regulations require that it be reviewed at least annually. Investments guidelines may be expressed as a range of possibilities, in recognition of the fact that economic conditions or views of the market may change and require a reallocation of assets in the portfolio. However, federal guidelines are definite that the SIP&P is intended to reveal the investment objectives of the fund clearly (OSFI, April 2000). They explicitly require that the range of possible allocations in the portfolio be sufficiently narrow that the intentions of the plan administrator are obvious with respect to the "asset allocation target" or "normal position" of the plan and that this be determinable by third parties from review of the SIP&P.

Once developed, the SIP&P can potentially introduce a considerable element of rigidity to the investment policies of a plan. The SIP&P will therefore reflect both objective and attitudinal factors that might affect the attractiveness of rental housing investments to a particular plan. The objective factors will include, for example, the liquidity of the investments in comparison to the plan's financial needs, or the financial constraints imposed by the total asset value of the plan in comparison to the cost of rental housing investments and the need to diversify along the various dimensions mentioned. The attitudinal factors will reflect the opinions of administrators and managers, whether correct or not, regarding a particular type of investment such as rental housing. While the SIP&P may be subject to revision in light of changes in objectives, attitudes and opinions may be more ensconced, particularly since detailed knowledge about a specialized category of investment like rental housing might not be routinely available to pension investment managers. As a result, attitudinal factors may become "institutionalized" and rigidly enshrined in the SIP&P. Chapter VI examines in detail both the objective and qualitative factors that influence pension investment decisions in rental housing, as reflected in responses to the survey.

Penalties

The Superintendent of Insurance may order the administrators of a pension plan to take corrective actions if the plan is following practices that are "contrary to safe and sound financial or business practices" (*PBSA*, section 11). Further, the Superintendent may revoke the registration of a pension plan if the administrator of the plan does not comply with a direction under section 11 {*PBSA*, section 11.1).

Provincially Regulated Plans

About 90 percent of pension funds in Canada are regulated by the provincial regulatory authorities, of which there are currently nine. There have been long-running complaints by pension managers and industry organizations about the deleterious effects of a hodge-podge of legislation and regulations on the pension environment, particularly in the case of organizations that have pension fund members employed in multiple jurisdictions. (See, Association of Canadian Pension Management (ACPM), January 2000.) In principle, it is possible for a fund with members in multiple jurisdictions to have to satisfy the regulatory legislation of ten jurisdiction (i.e., the federal and nine provincial jurisdictions) as well as complex tax rules.[5]

While reciprocal agreements between jurisdictions exist, there continue to be a myriad of differences--many minor, some not so minor--in the various pension statutes and their interpretation and administration, including with respect to eligibility, locking-in, opting- out, portability and life income funds. Indeed, PEI does not to this point in time even have pension legislation in place so that plans that would normally fall under the jurisdiction of that province currently go unregulated.[6] Increased harmonization of pension rules in a variety of areas, is a matter of some priority within the pension industry (Association of Canadian Pension Management, January 2000). Indeed, it is the view of the ACPM that incomplete harmonization of rules has contributed to the decline in the number of pension plans and to stagnation in the scope of plan coverage among employed individuals.

Considerable progress has been made to date in harmonizing legislation. Particular success has been achieved in the case of the pension investment rules. All of the provinces have adopted the "prudent person portfolio approach" to fund administration. Moreover, most have either adopted the federal investment rules contained in the *PBSR* and *Schedule III* of the Regulations or introduced their own legislation that closely mirrors the federal rules. In addition, all provinces require the development of and adherence to a formal investment plan that is either

---

[5]There is not even standardization at the provincial level in the departments assigned responsibility for pension funds across provinces. Currently, authority falls as follows: Newfoundland, the Department of Government Services and Lands; Nova Scotia, Department of Environment and Labour; New Brunswick, the Department of Training and Employment Development; Quebec, The Régie des Rentes du Québec, Minister of Social Solidarity; Ontario, the recently created Financial Services Commission, which is an arm's length agency of the Ministry of Finance; Manitoba, Labour; Saskatchewan, Justice; Alberta, the Treasury; British Columbia, Ministry of Labour.

[6]If an organization that would normally fall under the regulatory authority of PEI has employees working in other provinces, the pension assets of all employees, including those employed in the other provinces, currently go unregulated. The reciprocal agreements that would normally apply in such circumstances, including with respect to eligible pension investments, are not operable because of the absence of legislation in PEI.

equivalent to or closely akin to the SIP&P at the federal level. The principle provincial regulatory investment rules are summarized very briefly in the following table.

TABLE III.2: INVESTMENT RESTRICTIONS AND EXEMPTIONS FOR PENSION PLANS THAT ARE SUBJECT TO PROVINCIAL LEGISLATION AND REGULATIONS
(Y: means the province has an equivalent or similar provision)

Provision	Province								
	NF	NS	NB	PQ	ON	MA	SA	AL	BC
- Prudent person portfolio approach	Y	Y	Y	Y	Y	Y	Y	Y	Y
- SIP&P required	Y	Y	Y	Y	Y	Y	Y	Y	Y
- Single investment limited to 10% of total assets	Y	Y		Y	Y	Y	Y	Y	Y
- Exemption for real estate corporation	Y	Y			Y	Y	Y	Y	Y
- Exemption for qualifying pooled vehicles	Y	Y			Y	Y	Y	Y	Y
- Parcel of real property < 5% of assets	Y	Y			Y	Y	Y	Y	Y
- Total resource properties < 15% of assets	Y	Y			Y	Y	Y	Y	Y
- Total real estate & resource < 25% of assets	Y	Y			Y	Y	Y	Y	Y
- 30% limit on voting shares	Y	Y	Y	Y	Y	Y	Y	Y	Y
- Exemption for real estate corporation	Y	Y	Y		Y	Y	Y	Y	Y

SOURCE: Compiled from individual provincial pension acts and regulations.
NOTES:
(1) All public and private sector pension plans in the Yukon, Northwest Territories and Nunavut and those of Native organizations must comply with federal legislation and regulations.
(2) The author has been informed by officials at the OSFI that pension plans that would otherwise fall under the legislative authority of PEI are currently unregulated because that province does not have separate pension legislation in place.

A number of qualifying comments are appropriate. Manitoba, Saskatchewan, Alberta and British Columbia have already formally adopted the federal pension investment rules contained in the *PBSR*, and Ontario is in the process of doing so. In Ontario:

- effective 3 March 2000 (under Regulation 909), a pension fund may elect to meet the federal *PBSR* requirements and to be governed by them (sec.77);

• The *PBSR* rules apply mandatorily to all pensions as of 1 Jan. 2001; and

• administrators of plans that don't meet the *PBSR* requirements at that time must dispose of the assets of the fund by 1 January 2005 (sec. 80(2)).

None of the provinces east of Ontario have formally adopted the federal *PBSR* investment rules. Nova Scotia has its own regulations that mirror the federal rules closely. In addition to the exemption from the 10% rule for real estate corporations and pooling vehicles, there is also an exemption for a fund composed of mortgage-backed securities that are fully guaranteed by the Government of Canada or of a province. In Nova Scotia, a real estate corporation must also file an annual return with the regulator that includes financial statements, a listing of assets and an attestation as to compliance with the regulations. The Superintendent also has the authority to require a fund to get an independent appraisal of real estate asset values. Similarly, Newfoundland, while considered within the industry as not as yet having adopted the *PBSR* rules, has rules that are effectively the same, as can be seen from Table III.2.

Only New Brunswick and Quebec have pension investment rules that differ significantly from the federal rules. New Brunswick requires the development of a "savings investment plan and goals" document, which seems very similar to the SIP&P required at the federal level. The Superintendent is required to examine the document at least every three years. Legislation requires that all investments undertaken must be "...permissible under the written statement of investment policies and goals." In New Brunswick the 10 percent restriction does not apply to shares of any corporation (Reg. 44(11)(c)). The province does not have a provision explicitly exempting a real estate corporation from the 30% restriction; however, the restriction does not apply in the case of "an investment opportunity in real estate, resource property or venture capital" (Reg. 44(13)(b)).

In Quebec, the 10 percent restriction does not apply to mutual fund shares but there is no reference to an exemption for other pooled funds. The exemption from the 30 percent restriction in Quebec is contained in the *Taxation Act* (chapter I-3). On 29 November, 2000, Quebec passed a new bill into law (Bill 102, *An Act to Amend the Supplemental Pension Plans Act*) in which the general 10 percent restriction was repealed and replaced by a provision that limits investments to 10 percent only in the case of investments in securities controlled by the employer. Under the new amendment, greater emphasis is placed on portfolio diversification and the obligation of administrators to act prudently.

In summary, there have been significant advances in harmonizing the pension investment rules among provinces. It is suggested that this process be completed. Such harmonization is important in order to promote a healthy and integrated national investment climate, including with respect to rental housing investments. If there are differences in the rules among jurisdictions, this adds complexity to the process of making rental housing investments and might increase investment managers' reluctance to make such investments. Indeed, it may be the case that lack of harmonization in other areas of pension legislation (i.e., in areas other than

the actual pension investment *per se*) may be having an indirect negative effect on the overall pension investment environment. Greater harmonization could only serve to foster the likelihood that investment managers would take a national perspective in making rental housing and other investment decisions.

B. Tax Legislation and Regulations

Rules and Permitted Investment Instruments for RRSPs

Eligible investments for an RRSP are defined under the *ITA* and the *Regulations* to the Act. This section discusses the tax rules applying to RRSP investments in rental housing and the income tax consequences of the RRSP holding non-qualified investments.

Eligible Investments for an RRSP

The specific kinds of property that constitute qualified investments for an RRSP are described in paragraph 146(1)(g) of the *Act* and section 4900 of the *Regulations*. (For a detailed description of the RRSP investment rules, see Canada Customs and Revenue Agency, *Interpretation Bulletin* 320 R2.) Some of the common types of investment that qualify are the following:

(a) certain bonds, debentures and similar obligations of the Government of Canada, a province, municipality, or Crown corporation;
(b) guaranteed investment certificates, issued by a Canadian trust company;
(c) shares and debt obligations of corporations listed on a prescribed stock exchange in Canada;
(d) shares listed on a prescribed stock exchange outside Canada;
(e) shares of the capital stock of certain public corporations;
(f) units of a mutual fund trust; and
(g) mortgages (but see below).

Real property is not a qualified investment for an RRSP, except in the uncommon case in which it is acquired as a consequence of a default in a mortgage under which the plan was the mortgagee and it is sold within a reasonable period of time (usually considered to be one year).

A mortgage secured by real property situated in Canada is a qualified investment for an RRSP if the mortgage is insured and administered by an approved lender under the National Housing Act, or if the mortgagor is not the annuitant under the plan and deals at arm's length with the annuitant.[7] A mortgage will also qualify under subparagraph 204(e)(ii) of the *Act* if it is a

---

[7]RRSP funds in self-directed plans can, with certain restrictions, also be used by an annuitant to invest in his own mortgage if the investment is administered at arm's length. Under the "Home Buyers Plan," an annuitant can remove, and later repay, up to $20,000 from his RRSP ($40,000 in the case of a married couple) to use as a down payment for a first home. The unit

mortgage of a government in Canada or a mortgage guaranteed by the Government in Canada. A qualifying mortgage is not restricted to a first mortgage.

An interest in a trust is a qualified investment only if the trust is a mutual fund trust, a small business investment trust, or a "registered investment." Note that by section 204.4(1) of the *ITA*, an investment can only be a "registered investment" in respect of an RRSP, a registered retirement income fund (RRIF) or a deferred profit sharing plan (DPSP); it cannot be registered in respect of a registered pension plan. However, if a trust is registered in respect of an RRSP, RRIF or DPSP, it is excluded from the definition of foreign property (see below) for all purposes, even if held exclusively by an RPP. An eligible pooled investment for an RRSP includes a mutual fund trust, or a trust qualifying as a "registered investment," which can also include a quasi-mutual fund trust, a pooled fund trust, a quasi pooled fund trust, a mutual fund corporation, a quasi mutual fund corporation, an investment corporation and a quasi investment corporation.

Trusts that are registered investments cannot invest in rental housing because a trust that achieves "registered investment" status in respect of an RRSP can only invest in assets that are eligible investments for RRSPs, and real estate is not an eligible investment for an RRSP. However, real estate investment trusts (REITs) are qualified investments for RRSPs since in Canada REITs are structured as closed-end mutual fund trusts.

The implications of an RRSP or an RPP investing in rental housing through pooled vehicles is examined later in this chapter.

The Consequences of Holding An Ineligible Investment

General Tax on Non-qualified Investments

Subsection 146(4) of the *Act* provides that a trust that qualifies as an RRSP investment is generally not taxable on its income. One of the conditions that must be met in order for the trust to maintain its tax-free status is that it must hold qualified investments. If an RRSP acquires a non-qualified investment, the fair market value of the investment at the time it was acquired is added to the income of the annuitant under the plan (subsection 146(10) of the *Act*). When the non-qualified investment is disposed of, the annuitant can deduct from income for the year the lesser of the amount previously included in income and the proceeds of disposition (subsection146(6)).

The Foreign Property Tax

The annuitant of an RRSP which acquires a non-qualified investment may also be subject to a special tax under Part XI of the *Act*. Generally speaking, Part XI tax is imposed on certain

---

bought could include a rental component.

taxpayers which hold foreign property in excess of specified limits. The foreign property rules are complex (see, Canada Customs and Revenue Agency, *Interpretation Bulletin* 412 R2). Section 205 of the *Act* specifies that the taxpayers who may be subject to the special tax include a trust governed by an RRSP or an RPP, corporations that administer pension fund investments, a master trust, or a "registered investment." These investment vehicles are examined in some detail below. The specified foreign property limit, which was originally 10 percent, has been increased in stages; it was 25 percent for the year 2000 and has peaked at 30 percent for the year 2001. The tax is equal to 1% of the fair market value of the non-qualified investments held at the end of each month. Subsection 146(10.1) of the *Act* also requires the RRSP to pay tax on any income or capital gains derived on these non-qualified investments. Any interest in a trust held by an RRSP is considered to be foreign property unless it is a "qualified investment" as defined earlier.

Rules and Permitted Investment Instruments for RPPs

All pension plans must apply and be accepted for registration by Canada Customs and Revenue Agency. Sufficiently detailed information must be filed with the application to permit a decision on the plans eligibility. This includes a completed "Application for Registration of a Pension Plan" (form T510); certified copies of the plan text and any other documents that contain the terms of the plan; certified copies of all trust deeds, insurance contracts, and other documents relating to the funding of benefits under the plan; and certified copies of all resolutions and by-laws relating to the above documents. The federal minister must approve the funding arrangement for the plan. If the plan is required to be registered under the federal *PBSA* or one of the similar provincial acts, the registration must be completed before application can be made under the *ITA*. Otherwise, for example in the case of certain closely-held private pension plans, the plan must contain a requirement that all investments will conform to the investment requirements of section 9 of the *PBSA* and section 6 and Schedule III of the *PBSR* (see, Canada Customs and Revenue Agency, *Interpretation Circular* 72-13R8).

The investment rules for RPPs differ from those of RRSPs in that RPPs can invest in anything that is not specifically identified as an ineligible investment. Aside from the foreign property restriction, there are really only two general restrictions in the income tax legislation on pension fund investments. First, no fund can make investments that are ineligible investments under the federal or provincial regulatory legislation that applies in the jurisdiction in which the plan is registered (Reg. 8502(1)(h)). Second, investments that are not made at arm's length are not permitted (Reg. 8514). Thus, for example, since shares in a REIT are not identified as ineligible investments under tax legislation and there is no restriction against them under *PBSA/PBSR*-type legislation, a pension fund can invest in them. Similarly, an RPP can invest directly in rental housing property.

C. Investment Vehicles for RPP and RRSP Investments in Rental Housing

In this section, I review the various options that arise for RPP and RRSP investments in rental housing, with most of the concentration on equity investments or ownership interests.

Direct Investment: Sole Ownership

One option for investment is direct sole ownership of and legal right to a rental housing property. As noted, this is not an option for an RRSP although it is for an RPP. The pension fund would be the sole owner of the property and might manage it internally or acquire the services of external management expertise. As long as the property is located in Canada, the property would not be "foreign property" and would therefore not give rise to potential complications under the foreign property restrictions of the income tax legislation. Because the income of any properties that are held directly are flowed directly through to the property owner for tax purposes, this structure should be attractive from a tax perspective to a non-taxable pension fund.

There are, however, a number of significant negative elements to this approach to rental housing investment. First, because of the constraint under *PBSA/PBSR* or similar provincial legislation that limits a pension fund's investment to not more than 5 percent of assets, this approach would be an option only for larger funds. For example, a $5 million investment (which might represent a 50 unit rental investment) would require the fund to have $100 million in assets. For a fund to own, say, five such properties would require it to have about $500 million in assets. While about three-quarters of pension funds have assets greater than $100 million, fewer than half have assets greater than $500 million. Although this makes it unlikely that a large portion of pension funds would be able to make direct rental housing investments, this does not impose a significant restriction on the potential flow of investment funds to the sector. This is because funds with assets greater than $100 million account for about 99 percent of total pension assets, while those with assets above $500 million account for about 98 percent of total assets. Adequate diversity in its property holdings would be required for a fund to develop sufficient specialized investment and portfolio diversification. Access to property management expertise could also be a problem although this could perhaps be circumvented by the fund acquiring the services of an external property management firm.

A second problem is that there are potential liability concerns. Unlike many of the other investments typically held by a pension plan, real estate carries with it the potential for personal, environmental and other liabilities. It is possible that the fund's assets could be exposed to legal actions in respect of the real properties, for example, if property insurance does not cover all contingencies.

A third difficulty is that there can be problems with cash flow because of the illiquidity associated with ownership of real property. The need for an investor to make property development expenditures might require that current rental earnings be plowed back into the

property, and might even result in interruptions in the flow of rents while construction proceeds. In such circumstances, investors would be foregoing current revenues for future gains, including capital gains, but this might conflict with the fund's requirements in meeting its actuarial obligations. Liquidity issues also arise because of the "lumpiness" of rental housing investments. This could be a particular problem when housing markets are in a slump so that access to needed liquidity could only be obtained by taking a substantial loss on a large investment. In light of these problems, the prudent person portfolio approach to pension fund administration could therefore potentially create quite a significant barrier to pension fund investments in rental housing for many pension funds. Still, some pension funds have directly acquired real estate properties, such as the Caisse de dépôt et placement du Québec, which recently announced a $1.2 billion investment of pension funds it manages to develop retirement homes across Canada.

Partnerships

The formation of a partnership among a number of pension funds is a possible option to reduce some of the disadvantages of direct sole ownership of a rental housing property. A partnership can to a considerable extent circumvent the investment constraints by spreading the cost of the investment among a number of funds, or even between one or more funds and a number of other investors. Also, because of the flowthrough nature of a partnership arrangement, the earnings of the partnership would continue to be non-taxable when attributed to the pension fund partners. Income is simply passed through to each partner in proportion to the partnership units that it holds. Virtually any degree of diversification in property holdings would be achievable through the commingling of the assets of sufficient numbers of partners. Problems with managing the property would be reduced or eliminated since the partnership arrangement would permit the retention of outside management expertise.

The partnership arrangement could also alleviate the liquidity and "lumpiness" problems of sole ownership of a rental housing property because, if cashflow problems arise for one of the partners, some of its partnership units could be sold to either existing or new partners without selling the underlying property. While potential problems with exposure to legal liability could not be eliminated through a partnership arrangement they could be limited somewhat through an explicit clause in the lending document limiting recourse to the lender to particular assets (Shafer, 1996), although such a provision would not be airtight in all circumstances. An arrangement in which pension funds were limited partners would go further by generally limiting their risk exposure to the capital investment, although limited partners cannot participate actively in managing the partnership. Exposure to liability would also be diminished in all types of partnership arrangements by the fact that the pooling arrangement permits the liability damages to be spread across larger capital pools so that the assets at risk to any given fund could be kept within reasonable limits.

One problem that can arise with a partnership arrangement is that an interest in a partnership by a pension fund is defined to be "foreign property" under subsection 206(1) of the *ITA* to a trust

governed by a registered pension plan, a pension corporation under paragraph 149(1)(o.1) and (o.2), and a master trust under paragraph 149(1)(o.4). As noted, the foreign property limit has been raised over time, most recently from 25 percent for the year 2000 to a peak of 30 percent for 2001. As a result of the increase in the limit, this might be less of a disincentive for a pension fund that does not invest in "real" foreign property or that typically does so well below the allowable limit. However, the foreign property constraint and the associated tax penalties that can arise could be a significant disincentive in the case of funds that typically undertake foreign investments at or near the maximum allowable limit. They may not want to expend foreign property room on domestic real estate investments, particularly if other investment arrangements are available.

Joint Ventures

Another possibility is for a number of pension funds to undertake a "joint venture" investment in a rental housing property.[8] There is no one accepted definition of a joint venture but very generally it is an association of natural or legal persons who agree by contract to engage in some common (usually *ad hoc*) undertaking for joint profit. It frequently involves the combining of specified resources without, however, the formation of a legal partnership, trust or corporate arrangement. The agreement also provides for a community of interest among the joint venturers, each of whom is both principal and agent within the scope of defined participation within the venture. Joint ventures often involve different businesses or organizations contributing different elements of specialization, expertise and capital for the achievement of the defined objective.

Participants in a joint venture do not normally intend to participate in a "business in common" with the other participants, as is the case, for example, in a partnership arrangement. A joint venture arrangement is not a separate legal entity and there is no separate legal statute governing joint ventures. While a joint venture is generally less complex to administer than a partnership, a formal agreement is still formed between the participants to establish capital contributions, distributions, profit sharing and responsibilities. A joint venture is almost always confined to a particular defined business undertaking, and allows the participants to carry on their own business outside the joint venture. It can be of short or long duration and may have a specific termination date. Joint venture arrangements are common in areas such as resource investments. In the case of real estate investments, they could involve the bringing together of development, management and investment expertise by different participants.

Income arising from a joint venture arrangement is taxable to the separate participants, which again is desirable because of the non-taxable status of pension funds. A joint venture arrangement in principle avoids the problem that plagues partnerships of the investment being classified as foreign property. However, because of the undeveloped nature of such investments

---

[8]For a good discussion of joint ventures in the Canadian context, see, Goldman and Corley, 1997.

in the real estate sphere, the danger is that the endeavour will be characterized as a partnership and thus be subject to the foreign property rules (Shafer, 1996). A joint venture arrangement is one way of permitting smaller funds to participate in rental housing investments because, like a partnership arrangement, it permits the pooling of capital resources. It can also reduce the problems that arise with a sole ownership arrangement of liquidity (since a participant can sell some or all of his interest to another participant) and of liability exposure (since risk can be diluted). However, it by no means eliminates these problems.

Co-ownership

A co-ownership arrangement in which a number of pension funds own a rental housing property is one way to avoid the investment constraints that could be binding in the case of a sole investment approach. This arrangement could also dilute liability exposure and, at least to some extent, liquidity constraints if there were buy-out provisions among the various participants. Co-ownership also avoids the foreign property rules as long as the relationship is not characterized as a partnership by the tax authorities. Because of the problems described above with direct ownership of properties, the participating entity in a co-ownership arrangement involving rental housing investments would most likely be a pension reality corporation. I return to this form of co-ownership below.

Stocks

An opportunity for indirect ownership of a rental housing property arises through the purchase of shares of publicly traded Canadian real estate companies. For any institutional investor, such as a pension fund, purchase of such stocks is exactly equivalent to the purchase of the stocks of any other corporation. All of the problems associated with liability, liquidity and lumpiness of investments that arise with direct ownership of a rental housing property disappear with indirect share investments.

However, cash flow problems can be a consideration (relative to other share investments) since real estate companies have historically lower dividend payouts and somewhat higher than average capital gains than other categories of share investments. Further, as discussed in chapter V, indirect investment in rental housing property through shares also loses a significant portion of the portfolio diversification advantages that direct real estate investments can entail. This is because of the much higher correlations between the returns of the stock market and the real estate company subgroup of the stock market then between the stock market and direct real estate holdings. In other words, real estate stocks tend to track trends in the stock market much more closely than do total returns from actual real estate holdings. Another limitation of share investments is that the underlying real estate corporation is taxable. While this is also true in the case of other types of investments in corporate shares, in the case of rental housing and other types of real estate investments, pension funds have the option of investment through a non-taxable real estate investment corporation (REIC, discussed below) which takes full advantage of the non-taxable status of pension funds.

Taxable Corporation

An extension of a share ownership arrangement is one in which a pension fund participates in rental housing investments through a taxable corporation with other taxable investors. Of course, the pension fund will have to comply with the various investment restrictions imposed under the *PBSR* or similar provincial legislation. That is, the corporate investment will have to be less than 10 percent of the fund's assets, the fund will not own more than 30 percent of the voting shares of the corporation, no single property investment will amount to more than 5 percent of a fund's assets, and all real estate and resource properties together will be less than 25 percent of the fund's assets. While desirable from the perspective of avoiding the foreign property restriction, limiting a fund's exposure to liability, achieving economies of scale and perhaps improving the liquidity of the investment, such an investment may jeopardize the fund's tax exempt status, unless very carefully structured and monitored. Moreover, use of a taxable corporation to make rental housing investments has the unattractive feature that it again does not take advantage of the non-taxable status of pension funds.

A corporate investment could, however, be attractive to a pension fund, if the corporation is not expected to be taxable during the period over which the pension fund anticipates holding the investment, and if the pension fund is making the investment with the sole intent of disposing of share holdings in the corporation at a profit at a future date. Such an investment might be particularly attractive in circumstances in which the pension fund is a primary lender to the corporation (Shafer, 1996). The principal and secure form of return would be through interest, with any side investment through incidental share appreciation being a modest, upside "sweetener."

Real Estate Investment Corporation

A non-taxable pension corporation may of course hold real estate investments subject to the restrictions and limitations described earlier (subparagraph 149(1)(o.2)(i) of the *ITA*). Subparagraph 149(1)(o.2)(ii) of the *Act* defines another non-taxable corporation for pension real estate investments, which I will refer to as a real estate investment corporation (REIC). The REIC vehicle is consistent with the real estate corporation that is identified under the *PBSA* to be exempt from the 10 percent and 30 percent restrictions applying to most other categories of investment under that legislation.

Requirements for the Establishment of a REIC

The following four requirements, which are set out in subparagraphs 149(1)(o.2)(ii) and (iv), must be met for a corporation to qualify as a REIC and to retain its non-taxable status.

1. Ownership of Shares

At all times, all of the shares and rights to acquire shares of the corporation must be owned by only the following entities:

a) registered pension plans;
b) trusts, all of the beneficiaries of which are registered pension plans;
c) one or more related segregated fund trusts all of the beneficiaries of which are registered pension plans; or
d) prescribed persons.

The term prescribed person for this purpose is defined in regulation 4802 to the *Act* and includes various pension fund trust and corporate entities (but not another REIC). It also includes a workers compensation trust created under provincial legislation.

2. Permitted Activities

A REIC has to restrict its activities at all times to acquiring, holding, maintaining, improving, leasing, or managing capital property that is real property or an interest in real property owned by the REIC, another REIC or an RPP. Because the legislation refers specifically to capital property, speculating in idle land is not permitted. The legislation does not allow a REIC to be involved in any business activities, as distinct from the activity of deriving income from property, that might be conducted from the property. A REIC can manage a rental housing property in-house, rely on the services of a third-party property management firm, or rely on the management provided by another participant in the property investment such as another REIC or a pension fund. The taxation authorities have ruled, however, that the REIC cannot accept a greater share in the responsibility for managing the property than the share of the aggregate undivided interest held by it and other REICs. In practice, this is typically dealt with by subcontracting the property management functions to a third party (Shafer, 1996).

In order to avoid the foreign property rules, it is important that any joint investment with other investors not involve a partnership arrangement. There are several options for structuring the arrangement to lessen the likelihood of the arrangement being characterized as a partnership (Shafer, 1996).

The simplest option is for the REICs to take direct joint ownership of a property or group of properties, and to lease it directly to tenants with management responsibilities handled either internally or externally. This arrangement, while the simplest, is the most dangerous in terms of the possibility of it being considered by the tax authorities to be a partnership arrangement in which the participants are carrying on a business with the intent of earning a profit. A second possibility is for the participating REICs to lease their interests in the properties to a taxable co-owner who than manages it. The contract with the managing firm would be structured to clearly indicate that the REICs are simply earning passive income from property. A third option,

referred to as "two-tier ownership" is for the REICs and the taxable partners to lease their property interests to a corporation owned jointly by them, which would manage the property. Each of the property owners would then only derive passive income from property and would probably not be considered as being in a partnership arrangement with the other owners. The problem with this arrangement is that the corporation managing the property would be a taxable entity, thus losing the advantage of the non-taxable status of the REIC owning property directly. However, as long as the arrangement is reasonable, and most of the rent from the tenants is paid out by the managing company to the REICs and other investors as leasing costs, the managing company should have very little taxable revenue remaining. Even more exotic arrangements are also possible such as "three-tier co-ownership" in which the REICs and other investors jointly own the improvements to the real estate but not the land, which is leased to them by a third party, be it one of the REICs or other investors or a separate corporation.

3. Eligible Investments

By subparagraph 149(o.2)((ii)(B), a REIC must at all times make investments only in real property or that a pension plan is permitted to make under the *PBSA/PBSR* or similar provincial legislation. The taxation authorities have interpreted the limitation on permissible investments to include both the quantitative and qualitative restrictions imposed by the relevant federal or provincial regulatory authority (Shafer, 1996). In applying the 10 percent and 30 percent restrictions, as well as the 5/15/25 percent restrictions relating to real estate and resource properties, the holdings of the REIC are considered in combination with all of the other investments–that is, the use of a REIC does not provide a means of circumventing or loosening these limits.

4. Restrictions on Borrowing

A final restriction on a REIC relates to borrowing. Under sub-paragraph 149(o.2)((ii)(C), a REIC is permitted to borrow money only for real estate investment purposes. Therefore, a REIC could take out a loan or a mortgage to improve a rental housing property or other real estate property but not in relation to any of its other investment activities.

Assessment

Investments through REICs fully utilize the advantages that pension funds have as non-taxable entities. They also limit the liability exposure of a pension fund's assets to the amount of the funds invested in REIC shares. Liquidity problems associated with direct ownership would be lessened, especially when there is more than one investor in the REIC, since shares could be disposed of to other investors without sale of the underlying real estate property. REIC arrangements should significantly improve the possibility of all funds participating in real estate transactions. Even a small fund could pool a limited portion of its assets with those of other REICS, pension funds or taxable investors to achieve economies of scale in developing or acquiring investment and property management expertise. It should be possible to circumvent

problems arising from the foreign property rules as long as the joint investment endeavours are structured carefully. Cashflow problems that may be inherent in real estate investments could also be reduced through the various multi-tiered leasing arrangements that are possible.

However, the holdings of a REIC are considered in combination with all of the other investments made by a pension fund in applying the various quantitative investment limits imposed by regulation. Also, a fund's investments through REICs, when considered together with all the other investments of the fund, would have to be appropriately diversified and consistent with the "prudent person portfolio" philosophy. In determining whether or not the various restrictions are met, there would be a look-through to the underlying holdings of the REIC and these would be counted, in proportion to the pension funds share ownership of the REIC, along with all of the other holdings of the pension fund. These requirements can impede the investment flexibility of a REIC.

Participating Loans

A participating loan arrangement, while not an equity investment, can be structured to achieve some of the features of such an investment. The pension fund could invest directly, through a pension corporation or through a REIC. The return paid in respect of the property investment would be tied wholly or in part to some measure of operational performance such as gross or net revenue. Whether the return on the investment is characterized as interest for tax purposes is immaterial to the pension fund since it is non-taxable in any event. As long as the return paid is reasonable, the tax authorities generally treat payments on the loan as a deductible interest payment to the borrower (Shafer, 1996). Such an arrangement would be more liquid than an equity investment, would not expose the fund to any liability risk beyond the original investment. It is highly flexible since it could be structured to achieve any desired combination of fixed and participating return. Funds of all sizes would be able to make participating loans. Of course the loans permit funds to participate only partially in real estate markets; they would not garner all operational returns and no capital gains. Participating loans are also considerably riskier than secured mortgage investments, although this would normally be compensated through higher expected returns.

Mortgage Instruments

Mortgages

Real estate mortgages are loans secured by real property. Mortgages are eligible investments for an RPP and government guaranteed mortgages are eligible investments for an RRSP (clause 212(1)(b)(ii)(C) of the *ITA*). Because they are fixed-yield secured loans, mortgages do not share the risk, profit participation or industry correlation features of equity investments in rental housing.

Mortgage Backed Securities

In 1986, under the sponsorship of the CMHC, financial institutions in Canada began issuing bonds called mortgage-backed securities (MBS) that are claims on a pool of otherwise non-marketable mortgages. The holders of these securities receive regular payments of principal and interest. MBS effectively represent an ownership interest in mortgage loans made by financial institutions to finance the purchase of real estate. As the underlying mortgages are paid off by the borrowers, the holder of the MBS receives payments of interest and principal. MBS can be purchased when they are first issued or in secondary markets, and can be pooled so that different classes of securities with different maturities and coupons can be created. While they provide the lender with greater flexibility, they still do not emulate equity investments. The ability to securitize mortgage loans enables mortgage lenders and mortgage bankers to access larger reservoirs of capital and to make financing available at lower costs. NHA Mortgage-Backed Securities are comprised of pools of amortized residential mortgages insured by CMHC under the National Housing Act (NHA). NHA MBS issuers are approved by CMHC and must be either a chartered bank, a trust company, an insurance company, a credit union, a loan company or a *caisse populaire*. NHA MBS are eligible investments for both an RPP and an RRSP (clause 212(1)(b)(ii)(C) of the *ITA*. Under paragraph 9(3)(e) of the *PBSR*, a fund composed of mortgage-backed securities that are fully guaranteed by the government is not subject to the 10 percent investment restriction imposed on most investments under *PBSA/PBSR* legislation.

Mortgage Investment Corporations

Mortgage Investment Corporations (MIC) provide another type of vehicle for an investor to invest in diverse packages of residential mortgages in virtually any amount. MIC, which are defined under section 130.1 of the *ITA*, act as intermediaries between investors and borrowers. MICs are only permitted to engage in investing activities, and at all times at least 50 percent of their assets must be in the form of mortgages, deposits or cash. Real property holdings must be less than 25 percent, excluding assets acquired through foreclosure, and managing or developing of the property is not permitted. An MIC must have at least twenty shareholders, none of which may own more than 25 percent of any class of the corporation's shares. An MIC operates much like a partnership or trust. Interest and capital gains earnings of the corporation can be flowed through to its shareholders in the form of tax deductible dividends, which is attractive to non-taxable institutional investors. As corporations, they also provide full liability protection to investors. Because of the restrictions on the ability of an MIC to hold and manage real estate, they provide only very limited opportunity for investors to participate actively in rental housing markets. There is no restriction on the ability of pension funds to hold shares in an MIC. Share of MICs listed on prescribed stock exchanges are eligible investments for an RRSP.

Pooled Fund Investments

This section examines the principal tax rules relating to rental housing investments through pooled trust investment vehicles, first for RPPs and then those that can also be used for RRSPs.

Pooled Vehicles for Registered Pension Plans

Pooled fund trust arrangements are one important way of permitting both small and large pension funds to participate in rental housing investments and to achieve an acceptable degree of diversity in property holdings. Pooled investment vehicles are also appealing to a large corporation that sponsors multiple plans for different groups of employees. They permit the assets of a number of plans to be commingled in various combinations, which can simplify administration and monitoring, and also permit greater asset diversification than would otherwise be possible. Liquidity of investment is also enhanced since units of the pooled fund trust can be sold among pension plans or other unit holders in the trust without sale of the underlying real estate. All trust arrangements potentially expose the assets to liability claims, a factor that must be considered by pension plans in choosing these investment options.

By paragraph 9(3)(a) of Schedule III to the *PBSR* a pension fund is generally permitted to invest in any segregated fund or mutual or pooled fund. If the pension fund invests more than 10 percent of its assets in a pooled fund, the pooled fund must comply with the investment rules in Schedule III that apply to a pension plan itself. Regulation 8502(h) of the *ITA* requires that RPP investments must comply with the rules under the relevant regulating legislation (whether federal or provincial) and must adhere to arm's length requirements.

Additional income tax provisions applying to pooled trusts themselves are also very important since potential adverse tax consequences can seriously undermine the advantages of pooled investments. For example, investments through pooled vehicles that are not carefully structured can give rise to adverse consequences under the foreign property rules of the *ITA*. Except under certain circumstances that are described below, if a pension fund holds more than 30 percent of its assets in foreign property (up from 25 percent in 2000), it is subject to the penalty provisions described earlier. All pension funds will want to avoid penalties under the foreign property provisions. Because of the increasing globalization of investment markets, most pension funds will probably also not want to use foreign property room on domestic rental housing holdings if this can be avoided. Under paragraph 206(1)(i) and Regulation 5000 of the *ITA*, any interest in a trust is considered to be foreign property unless a specific exception applies. The exceptions include the following:

- an interest in a trust that is a "registered investment;"

- an interest in a "pooled fund trust" that has no more than 30 percent of its assets invested in foreign property;

- an interest in a "master trust," provided that only one of either the pension plan beneficiary or the master trust owns foreign property; and

- an interest in a certain type of "quasi mutual fund trust" that has no more than 30 percent of its assets invested in foreign property;

While an RPP can hold an interest in a "registered investment," the first category of trust above, this is not a suitable vehicle for RPP rental housing investments. The reason for this is contained in section 204.4, which specifies the rules for registered investments. A trust cannot be a registered investment in respect of the rules governing eligible investments for an RPP, only in respect of the rules applying to an RRSP, RRIF or DPSP. Although a registered investment is excluded from the definition of foreign property for all purposes, including as an investment vehicle for an RPP, it is restricted to hold only investments that are qualified investments for the type of retirement plan for which it is a registered investment. Therefore, an investment that is registered in respect of, for example, the RRSP rules cannot hold real estate because real estate is not an eligible investment for an RRSP. I now consider the other options.

Pooled Fund Trust

A Pooled Fund Trust qualifying under Regulation 5000(7) of the *ITA* must meet the following conditions:

- 80 percent of the cost of its assets must relate to shares, options to buy shares, bonds, mortgages, marketable securities, cash, life insurance policies in Canada, annuity contracts, and income producing real property, and at least 95 percent of the income of the trust must be derived from such investments;

- no more than 10 percent of the trust's assets may be invested in the securities of any one corporation or debtor; and

- investment in any one real property may not exceed 10 percent of the trust's assets. Pooled fund trusts may therefore be used to invest in rental housing.

While pooled fund trusts are not themselves considered to be foreign property, they are subject to the foreign property rules in part XI of the *ITA* so that they are liable to the penalty tax on excess foreign property holdings. An unusual advantage, amounting to a significant increase in foreign property room, can be acquired by a pension fund that invests through a pooled fund trust. Up to 30 percent (increased from 25 percent in 2000) of the assets of a pooled fund trust can be invested in foreign property without incurring foreign property tax penalties. Therefore, while it may not be immediately apparent, the maximum amount of foreign property room that a pension plan that was a beneficiary in such a trust could hold without penalty is 51 percent. This maximum would be achieved by the fund investing 70 percent of its assets in the pooled fund trust, with 30 percent of that amount invested in foreign property, and the remaining 30 percent of the fund's assets being invested directly in foreign property. The total actual foreign property holding is then .7 x 30 + 30 = 51.

The main disadvantage of this pooled fund arrangement is the need to carefully monitor the trust to ensure that it does not go offside with respect to the various asset and income tests (see Krasa,1997). The requirement for constant monitoring applies to the foreign property holding of

both the pooled fund and the pension plan itself in order to avoid foreign property penalty tax. This type of trust arrangement is also not exempt from regular income tax so that all of the income must be passed through each year to the non-taxable pension fund beneficiaries to avoid double taxation, which could complicate the process of acquiring new properties or even substantially improving existing properties from earnings.

Master Trust

Less onerous rules, which are specified in paragraph 149(1)(o.4) of the *ITA* apply to master trust arrangements. All of the beneficiaries of a master trust must be registered pension plans or DPSPs. This type of trust is allowed to engage only in investment activities, and is permitted to invest in real estate. Perhaps its major advantage is that it does not have to meet the income and asset tests required of the pooled fund trust. One drawback of a master trust is that it is exempt from the foreign property definition only if either it holds no foreign property or the pension fund beneficiary holds no foreign property. Thus a pension plan could hold up to 30 percent of its assets directly in foreign property or the master trust could hold 30 percent of its assets in that form, but not both. No bump-up in the maximum foreign property limit is therefore possible through this type of arrangement. A master trust would not be as popular to pension funds that invest aggressively in foreign markets. This type of trust is, however, tax exempt so that no concern arises with the possible double taxation of income that is not flowed through to the non-taxable pension fund beneficiary each year.

Quasi Mutual Fund Trust

There is a type of quasi mutual fund trust, namely one qualifying under regulation 5000(1)(c), that is a potential vehicle for pension fund investments in rental housing. Such an investment vehicle does not have to meet the income and asset tests of the pooled fund trust arrangement described above, nor is it prevented from holding real estate as is the case of a quasi mutual fund trust that qualifies under paragraph 204.4(2)(d) of the *ITA* as a "registered investment." The principal drawback of this type of trust is that a class of its units must be qualified for distribution to the public (regulation 4801(b)), although there is no requirement that a minimum number of these units must actually be held by the public. This adds an extra layer of legal procedure and expense and might also be unattractive to pension funds that wanted the trust investments controlled among a relatively small number of pension funds. This type of trust is also taxable so that income must be paid out each year to the pension funds to avoid double taxation. One advantage of this type of trust arrangement is that it is eligible for the bump-up in foreign property room as described above.

Summary: Pooled Trust Vehicles for RPPs

Most pooled trust arrangements that could be used for pension fund investments in rental housing in Canada will be treated as foreign property. This might not be of concern to funds that are well under the foreign property limit with their other investments. In cases in which funds

want to avoid having the trust treated as foreign property, they will have to invest in one of the trust arrangements that are exempt from foreign property treatment. The pooled fund trust option provides the pension fund with a bump-up in its foreign property room but requires careful monitoring to ensure that the stringent income and asset tests are met and that both the trust and the pension fund separately comply with the foreign property limit. The master trust arrangement does not have to meet the asset and income tests, however, only it or the pension fund may invest in foreign property, and no bump-up in foreign property room is possible. It would not be popular to funds that invest aggressively in foreign markets. Master trusts are, however, exempt from tax so that income does not have to be passed through to the pension funds each year. The quasi mutual fund trust under regulation 5000(1)(c) does not have to meet the income and asset tests but it has the disadvantage that a class of its units must be qualified for distribution to the public. In summary, while there are numerous options available to pension funds for investments in rental housing through pooled trust arrangements, the foreign property rules add a considerable element of complexity. Funds will be placed in the position of choosing between greater flexibility in trust arrangements on the one hand, or gaining access to greater foreign property room and accepting more stringent restrictions on trust vehicles, on the other.

A Pooled Vehicle for both RPPs and RRSPs

An eligible pooled investment for an RRSP includes a mutual fund trust, a small business investment trust or a trust qualifying as a "registered investment." Small business investment trusts are not relevant for rental housing investments. As discussed, a registered investment cannot invest in real estate. One category of mutual fund trust, namely a real estate investment trust (REIT) can invest in real estate, including rental housing. REITs are a potentially important investment vehicle for both RPPs and RRSPs.

Real Estate Investment Trusts (REITs)

The first REITs were established in Canada in 1993 (see Wellman, 1999). Another study providing a useful introduction to the REIT industry in Canada is Brooks (undated). In Canada, REITs are governed under the *ITA*. The term REIT does not appear in the Act; rather, REITs qualify as RPP/RRSP investments under rules relating to closed-end mutual fund trusts (section 132(6)) which are a category of unit trusts (section 108(2)(b)). An amendment to section 108(2)(b)) in 1995 eliminated several of the risks that existed for Canadian closed end real estate trusts, including the risk of Part XII.2 tax that is levied on the income of certain trusts, and expanded the definition of a "unit trust" so that a REIT is treated a mutual trust fund under the *ITA*. A REIT must:

(1) be a trust resident in Canada;

(2) limit its activities to any combination of

• acquiring, holding, maintaining, improving, leasing or managing real property that is capital property, and

• investing in property other than real property

(3) hold at least 80% of its property in the form of shares (or property convertible into shares), bonds, mortgages, marketable securities, cash, rental or royalty rights to natural gas or petroleum resources located in Canada, and real property situated in Canada;

(4) derive not less than 95% of its income for the year from, or from the disposition of, investments described in (3) above; and

(5) hold not more than 10% of its property in the bonds, securities or shares in the capital stock of any one corporation or debtor.

REITs can hold either commercial or residential real estate. Because of their trust status, REITs do not provide full liability protection to members of a pension fund that is a beneficiary of a REIT. (This differs from the situation in the U.S. where REITs are almost always structured as corporations that provide limited liability to investors.) Canadian REITs can invest in real estate located outside of Canada; however, because of the combined operation of the 80 percent asset test and the 95 percent income test, options in this regard are very limited.

REITS are securitized and traded in open markets and on stock exchanges, although not as shares but as trust units. In principle, pension funds would have two main reasons to hold REIT units rather than holding real estate directly:

- the ability to diversify their real estate portfolios more broadly through commingling of funds; and
- the ability to achieve greater liquidity by avoiding the need to dispose of property, possibly during a slump in real estate markets, in order to meet periodic cash needs of the fund.

As discussed in the next chapter the portfolio diversification advantages of REITs are undermined somewhat by the fact that U.S. research reveals that REITs are not necessarily a fully satisfactory substitute for traditional real estate in portfolios; since REITs don't exhibit correlations with markets nearly as low as direct real estate holdings, they don't provide the traditional diversification benefits (Muldowney, 1998).

To this point in time, the REIT industry in Canada is relatively small and is essentially a small cap industry attractive primarily to the smaller investor with probably limited appeal to institutional investors such as pension funds. In 1998, the REIT industry in Canada consisted of only 15 funds with a total capital value of $3.5 billion (Wellman, 1999). When this figure is compared to the $644 billion in pension assets or the $885 billion in combined pension and RRSP assets in that year, it is clear that REITs could not currently play a major role as a principal vehicle for rental housing or other real estate investments by RPPs and RRSPs, although the industry could obviously grow in response to increased demand for units. (As discussed in the next chapter, this situation differs significantly from that in the U.S. where the REIT industry is comparatively larger and was, at least until recently, thriving. In the U.S., the term REIT usually refers to a special type of closed-end investment corporation with full limited liability protection and whose shares are publically traded in the market.) The small size of the Canadian REIT market also limits the liquidity associated with REIT investments. A small-sized REIT is also limited in its ability hold a variety of types of real estate in a variety of locations to permit the optimal degree of portfolio diversification that is consistent with the prudent person portfolio approach to pension fund administration.

REITs in Canada are not exempt from tax. A mutual fund trust is subject to tax on its taxable income and net realized capital gains in each taxation year except to the extent that such income and gains are paid or payable to unit holders. To avoid taxation and take advantage of the non-taxable status of pension funds, about 95 percent of a REITs income should typically be paid out to unit holders each year (Katmarian and Lowrie, 1997). As a practical matter, it is usual for a REITs declaration of trust to require at least 85 percent of distributable cash (usually defined before depreciation) to be paid out, which is usually considered equivalent to 95 % of taxable income (see, *Tax Topics*, CCH Canadian Limited, August 13, 1998, p. 4). Since a REIT is not a corporation, it is not subject to provincial tax on capital or to federal large corporations tax. However, because of the 95 percent payout rule, REITs are limited in their ability to expand by acquiring new properties and even to some extent in their ability to upgrade existing properties. Because of the restriction that REITs must only hold real property that is capital (i.e., depreciable property), they are prevented from speculating in idle real estate. Wellman (1999) found that the ability of REITs to become fully integrated companies, as is the case in the U.S., is impeded by the tax rules and their status as trusts. Specifically, Canadian REITs have very little potential to construct new buildings because of the *ITA* restriction that limits them to "improving" properties, as opposed to developing them (see rules governing REITs above and discussion in Wellman, 1999, p. 37-38.) While existing tax rulings might allow new units to be added to an existing capital property, even this is a grey area and could conceivably be ruled out in the future. Welman also found that the inability of Canadian REITs to offer a tax deferral when property is transferred into a REIT, as is possible under the UPREIT arrangement in the U.S. (see the discussion in the next chapter), was a major impediment to the expansion of residential REITs in Canada.

The fact that REITs are structured as closed-end mutual funds also limits any growth in property acquisitions. In a closed-end fund, units are bought and sold but the contributed capital remains

fixed following an initial period at the time the units are offered for sale. Thus, funding for new acquisitions must come from earnings generated, which, as noted, potentially exposes earnings to taxation.

REITs are somewhat attractive to foreign investors who may want to invest in Canadian real estate. This is because, generally, a non-resident will not be subject to Canadian capital gains tax, so long as he doesn't own more than 25 percent of the REIT units.

As in the case of a pooled fund trust or a quasi mutual fund trust, a REIT can also arrange its investments in such a way so as to qualify for the bump-up in foreign property room as described above. As discussed, this significantly increases the flexibility of a pension fund in mixing foreign and domestic investments in its portfolio with real estate investments.

The potential liability risk exposure associated with REITs could limit their attractiveness to pension funds, especially given the restrictions under the prudent person philosophy. The unit holders could be held partially responsible under any liability litigation arising from the ownership of the real property. With potential unlimited exposure to liability, the fear can be that the pension fund, as the big player in the investment fund, might end up bearing the burden of any successful liability suits. This liability exposure can be limited somewhat by both insurance and a requirement in the REIT declaration of trust that each contract entered into by the REIT includes a specific provision excluding personal liability of unit holders (see, *Tax Topics*, CCH Canadian Limited, August 13, 1998, p. 4). The prevailing view seems to be that the Canadian REITs must evolve to be more like the U.S. version, particularly with respect to liability exposure, the ability to form fully integrated companies, and the ability to provide tax deferred deals on property acquisitions, if they are to gain wider appeal among institutional investors like pension funds (Wellman, 1999 and Katmarian and Lowrie, 1997).

In summary, REITs are a potentially important vehicle for investment in rental housing for both RPPs and RRSPs, although they currently suffer from a number of shortcomings that restrict their attractiveness to pension funds, including:

- potential problems with liability risk exposure;
- financing restrictions arising because of their closed-end nature and the fact that they must pay out earnings annually; and
- restrictions that impede their ability to become fully integrated real estate companies.

D. Summary and Conclusions

Most pension plans in Canada fall under provincial regulatory authority, although considerable harmonization in regulation has been achieved to date. Particular success has been achieved in the case of the pension investment rules. All of the provinces have adopted the "prudent person portfolio approach" to fund administration. Moreover, most have either adopted the federal

investment rules contained in the *PBSR* and *Schedule III* of the Regulations or introduced their own legislation that closely mirrors the federal rules. In addition, all provinces require the development of and adherence to a formal investment plan that is either equivalent to or closely akin to the Statement of Investment Policies and Procedures (SIP&P) at the federal level.

Still, there is incomplete harmonization of the pension investment rules for the provinces east of Ontario. Harmonization is important in order to nurture a healthy and integrated investment climate and to increase the likelihood that investment managers take a national perspective in making investment decisions. If there are differences in the rules among provinces, this adds complexity to investment decision making and might increase investment managers' reluctance to make rental housing investments. It is therefore suggested that the process of harmonization be completed.

There are many legislative factors that affect the ability of a pension plan to invest in rental housing. First, there are the restrictions under the federal *PBSA/PBSR* and similar provincial legislation. Generally, the rules can be summarized as follows:

- not more than 10 percent of a fund's assets may be invested in a single company or corporation or two or more affiliated companies or corporations;
- a fund may not control more than 30 percent of the voting shares of a corporation;
- the 10 percent and 30 percent restrictions do not apply to investments in a real estate investment corporation;
- the 10 percent restriction does not apply to investments made through mutual or pooled funds that comply with the investment rules of Schedule III of the *PBSR*;
- no more than 5 percent of a fund's assets may be invested in a single parcel of real property; and
- all real and resource properties together may not exceed 25 percent of total assets.

In addition to the quantitative restrictions, the *PBSA/PBSR* also creates qualitative restrictions on pension fund investments. A detailed SIP&P must be developed that specifies, among other things, the fund's investment strategy, categories of investments, approach to diversification, asset mix and objectives. The SIP&P will reflect the attitudes, whether right or wrong, of administrators and managers toward rental housing investments. These attitudes may become institutionalized and enshrined in the SIP&P, which could create long-term obstacles to investing in rental housing. Regulations also require that pension funds adhere to the prudent person portfolio approach to investing.

As regards real estate, the qualitative requirements of the *PBSA/PBSR* would necessitate greater diversification than is mandated by the quantitative restrictions, including with respect to type and location of property. The prudent person portfolio approach to portfolio management effectively requires a high level of professional conduct from pension fund investment managers in selecting and managing portfolios of investments. This may create a reluctance on the part of managers to participate in a highly specialized field like rental housing investment, which

requires not only detailed investment knowledge of real estate markets, but also development of in-house property management expertise or access to such from outside sources.

The prudent person portfolio philosophy might also indirectly magnify the negative effect on rental housing investments of liability risk associated with certain types of rental housing investment arrangements, including direct ownership, partnership and pooled trust arrangements (including REITs) since investment managers may not want to be perceived by regulators as exposing pension assets to unnecessary potential legal liability, even if the actual likelihood of adverse legal judgements is relatively remote. The possibility of a lingering negative influence of the old rules-based regulatory environment that prevailed prior to the adoption of the prudent person portfolio approach should not be discounted. Under the old framework, equity investments in real estate were permitted only under the 7 percent "basket clause" provision, which in the eyes of many pension managers had strong connotations of "basket case" investments (Jog and MacNevin, 1988). It is quite possible that there continue to be unjustified negative residual perceptions on the part of pension managers toward former basket clause investments, or at least that managers are overly wary about the attitudes of regulatory authorities, particularly if problems develop with such investments.

The impact of the income tax system was also examined in detail. In addition to requiring adherence to the *PBSA/PBSR* or provincial regulatory legislation, the *ITA* imposes complex conditions on the different arrangements that a pension fund can utilize to invest in rental housing, such as those through various pooled fund, corporate, and partnership arrangements. Also, certain arrangements for structuring rental housing investments have complex interactions with the *ITA* foreign property rules. Some arrangements run the risk of being classified as foreign property and thus either using up scarce foreign property room or exposing the fund to penalty provisions; alternatively, other arrangements may earn extra foreign property room for a fund.

In general, while there are a wide variety of options available for pension investments in rental housing, fiduciary, trust and income tax restrictions create many specific obstacles to pension funds that do not exist for other investors. As concerns RRSPs, income tax legislation forbids direct investment by such funds in rental housing. However, REITs are a possible pooled investment vehicle for RRSPs as well as RPPs, although a number of drawbacks were identified in this chapter that currently limit the attractiveness of REITs.

CHAPTER IV: INVESTMENT INSTRUMENTS IN THE U.S.

A. Introduction

This chapter describes some of the more common vehicles for pension fund investments in real estate in the U.S. Each vehicle examined is intended to provide essentially tax-free returns to the funds.

From the perspective of regulation, pension plans in the U.S. can be classified as either governmental or non-governmental plans. Non-governmental plans are subject to the Employee Retirement Income Security Act of 1974 (ERISA), as amended, which is a comprehensive statute generally pre-empting state laws in the case of pension rules. Governmental plans are not subject to ERISA; rather they are subject to state laws and regulations that are frequently similar to ERISA in certain respects.

Section 404 of ERISA contains the "prudence" rule, which is similar to the "prudent person portfolio" rule in Canada. The section specifies that fiduciary duties must be carried out:

> With the care, skill, prudence and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.

The Section also provides that a fiduciary must carry out his or her duties in accordance with the plan documents, which must be consistent with ERISA. While ERISA requires a fiduciary to diversify the investments of a plan to minimize the risk of large losses, the appropriate degree and form of diversification cannot be stated as a fixed percentage and the prudent fiduciary must consider the facts and circumstances of each case.

The next section describes the principal non-taxable investment vehicles that could be used by U.S. pension and retirement plans for rental housing equity investments.[9] As appropriate, it also contrasts the U.S. and Canadian vehicles.

B. Major Investment Instruments

Real Estate Investment Trusts (REITs)[10]

A real estate investment trust (REIT) in the U.S. may purchase, own and manage real estate properties and/or real estate loans, develop properties or originate loans. A REIT permits the capital of investors to be combined in order to acquire or provide financing for most forms of

---

[9]See Kruger (1996).

[10]See the NAREIT website (http://www.nareit.com).

real estate, including apartments, shopping centres, offices, warehouses and other types of commercial and industrial properties. REITs in the U.S. can be and usually are structured as corporations. As discussed in the previous chapter, this differs from the situation in Canada where all REITs are structured as trusts, specifically, as closed-end mutual fund trusts. While it might technically be possible to structure a U.S. REIT as a trust, the corporate structure is virtually always preferred because of the liability protection provided to investors. REITs shares are freely traded, most commonly on major stock exchanges.

REITs were allowed by Congress through an amendment to the U.S. *Internal Revenue Code* in 1960 but were not very popular for the first three decades of their existence. This was in part owing to the fact that initially REITs, while permitted to own real estate, were not allowed to operate or manage it. As a consequence, REITs had to engage third parties, whose economic interests might differ from those of the REITs' owners, to undertake these activities. A change to the Code in 1986 permitted REITs to directly operate and manage the properties they owned. The popularity of REITs also improved significantly as a result of successive legislative improvements to the REIT vehicle over the years. As long as they continue to meet eligibility criteria, REITs are essentially permitted to become fully integrated companies that can develop and finance real estate deals as well as own and manage real estate properties. REITs also benefited from the tax reform initiatives in 1986 and subsequent years, which eliminated a lot of the tax shelter benefits for alternative forms of real estate investment that competed directly with REITs.

For an entity to qualify as a REIT under the tax Code, it must:[11]

- be managed by a board of directors or trustees;
- have shares that are fully transferable;
- have a minimum of 100 shareholders;
- obtain not less than 75 percent of its income from real estate, including rents and mortgages;
- pay dividends each year equal to at least 90 percent of its taxable income;[12]
- obtain no more than 30 percent of its income from the sale of property held less than four years; and
- have no more than 50 percent of its shares held by five or fewer individuals during the last half of each taxable year.

One attractive feature of REITs from the perspective of a pension plan is that for purposes of the five-or-fewer rule (but not the 100-shareholder rule), the ownership of REIT shares are deemed to be owned by the plan's beneficiaries. As a result, a single pension fund could own a large share of a REIT as long as there were at least 99 other minority shareholders.

---

[11]*Internal Revenue Code*, Subchapter M, Part II, Sec. 856.

[12]The *REIT Modernization Act* passed in 1999 reduced this restriction from 95 percent, effective 1 January 2001.

U.S. REITs provide all of the features and benefits of Canadian REITs. They eliminate the lumpiness of real estate investments and permit even small investors to participate in large commercial real estate endeavours or in portfolios of diversified properties. They also permit large funds to meet fiduciary requirements by maintaining adequate property diversification–for example by type, size, and location. They improve the liquidity of real estate investments, at least in the case of publically traded REITs, since shares can be disposed of without selling the underlying asset. They also eliminate the need for in-house property management expertise for funds that either don't want to, or can't, acquire it. REITs remove the need for highly specialized investment expertise since even managers of small funds are familiar with the mechanics of the stock market, and the purchase of REIT shares is no more difficult than buying the shares of any company in any industry. One theoretical drawback of REITs, however, is that research indicates that movement in REIT share prices tend to be more highly correlated with movement in the stock market than are direct real estate holdings (see Chapter V). Thus, REITs do not have the portfolio diversification features that direct holding of real estate assets entails.

As is the case in Canada, a major advantage of owning REIT shares to a tax-exempt pension fund is that earnings and realized capital gains of the REIT are taxable for federal income tax purposes only once–in the hands of the investor.[13] This permits income from properties to accumulate in the fund free of tax. Unlike a partnership arrangement, however, a REIT cannot pass its losses through to its investors, but this is of no concern to a non-taxable pension fund. REITS are also eligible to treat part of their dividends as a return of capital for tax purposes; while this can significantly reduce the tax liability of a taxable investor, it is also irrelevant to a non-taxable pension fund. As is the case in Canada, a principal drawback of the REIT vehicle is that most of the earnings must be flowed out to the investor each year, which impedes the ability of the REIT to acquire new properties and even in some cases to substantially improve existing ones. However, one advantage that U.S. REITs have over Canadian REITs is that existing U.S. REITs are able to raise additional capital by issuing new shares through public offerings; as discussed in the preceding chapter, Canadian REITs are structured as closed-end mutual fund trusts for which contributed capital is essentially fixed. U.S. REITs also benefit from certain provisions that permit tax-deferred property transfers into the REIT.

The following three basic types of REITs are in existence in the U.S.:

- equity REITs, which own real estate outright and derive their revenues primarily from rent and to a lesser extent from realized capital gains;

- mortgage REITs which lend money to real estate owners and derive their revenue primarily from interest earned on the associated mortgages (some also invest in residuals or mortgage-backed securities);

---

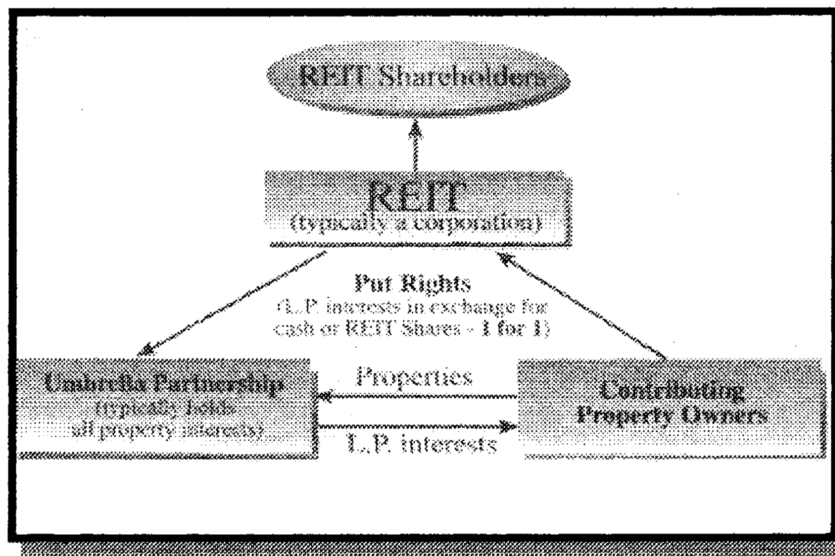
[13]Most states also exempt REITs from state income tax.

- hybrid REITs which combine the investment strategies of quity and mortgage REITs.

REITs can also be distinguished by the type of property they hold. Some REITs invest in a variety of different types of property such as apartments, shopping centres, office buildings, warehouses, hotels, and so on. Other REITs hone their investment and operational expertise by specializing in a single type of property or in specialized groupings of properties; for example, health care REITs specialize in health care facilities such as hospitals, medical office buildings, nursing homes, and assisted living centres. Some REITs specialize in properties located only in certain geographical regions or even in a particular city, while others may invest throughout the country.

Two new variants of the REIT–the UPREIT and the DownREIT--have been created in the U.S. to provide greater flexibility in property transfers (see, for example, Olney, 1997).

The UPREIT (umbrella partnership REIT) was created in 1992 to eliminate tax complications that could arise when various individuals or partnerships owning multiple properties brought their resources together. In a typical UPREIT, individuals (or partnerships) who hold real property they want to transfer, form an "operating or umbrella partnership" with a newly-formed REIT The individuals (or partnerships) contribute their real property holdings in exchange for limited partnership units in the operating partnership. In the new operating partnership, the REIT is typically the general partner and owns the majority of the operating partnership units. The newly-formed REIT would raise financial capital in the normal fashion–that is, through the issuance of shares to the public–at the time of the formation of the UPREIT. The following diagram show a typical UPREIT.[14]



[14]Source: Chilcote (1998).

Tax otherwise due because of the real property transfers at the time the UPREIT is formed is deferred. The UPREIT thus provides investors with the ability to lock-in the gain on the appreciated value of real properties during up-cycle periods without triggering capital gains tax. Eventually (frequently after one year), the limited partners would generally achieve the same liquidity as the REIT shareholders by selling unit holdings in the operating partnership for either cash or REIT shares (at the option of the REIT or operating partnership). This conversion may result in the partners incurring the tax liability that was deferred at the UPREIT's formation. The unit holders may tender their units over a period of time, thereby spreading out such tax. Existing UPREITs frequently issue additional operating partnership units to individuals or partners in other partnerships that hold and operate commercial real estate, while simultaneously issuing additional REIT units to investors. Thus, an existing UPREIT can acquire additional properties. The UPREIT vehicle has proved extremely popular, to the point where three-quarters of new REITs are structured in this way.

The DownREIT investment vehicle is essentially the same as the UPREIT, except that in the case of the DownREIT, the REIT owns a substantial amount of property directly; in the case of the UPREIT essentially all of the property is held in the operating partnership. The DownREIT was introduced to provide additional structuring flexibility.

The following table, from information compiled by NAREIT (http://www.nareit.com), the REIT national association in the U.S., shows the publically-traded REIT market capitalization from 1971 to 1999. In addition to these publically- traded REITs, there were approximately another 100 or so private REITs.[15]

---

[15]The *Internal Revenue Code* does not require a REIT to be registered with the Securities and Exchange Commission or publicly listed on a stock exchange. Instead, Congress relies on two of the requirements described above to ensure that a REIT is sufficiently widely held–namely, that there are at least 100 shareholders and that no more than 50 percent of shares are held by five or fewer individuals. A pension fund could therefore apparently hold units in a private REIT; however, the author was unable to obtain any data on the aggregate size of the private REIT sector or the extent to which pension funds invest in them.

TABLE IV.1
EQUITY MARKET CAPITALIZATION OUTSTANDING OF U.S. REITs

	All REITs		Equity REITs		Mortgage REITs		Hybrid REITs	
End of Year	**# of REITs**	**Market Cap ($ million)**	**# of REITs**	**Market Cap ($ million)**	**# of REITs**	**Market Cap ($ million)**	**# of REITs**	**Market Cap ($ million)**
1971	34	1,494.3	12	332.0	12	570.8	10	591.6
1972	46	1,880.9	17	377.3	18	774.7	11	728.9
1973	53	1,393.5	20	336.0	22	517.3	11	540.2
1974	53	712.4	19	241.9	22	238.8	12	231.7
1975	46	899.7	12	275.7	22	312.0	12	312.0
1976	62	1,308.0	27	409.6	22	415.6	13	482.8
1977	69	1,528.1	32	538.1	19	398.3	18	591.6
1978	71	1,412.4	33	575.7	19	340.3	19	496.4
1979	71	1,754.0	32	743.6	19	377.1	20	633.3
1980	75	2,298.6	35	942.2	21	509.5	19	846.8
1981	76	2,438.9	36	977.5	21	541.3	19	920.1
1982	66	3,298.6	30	1,071.4	20	1,133.4	16	1,093.8
1983	59	4,257.2	26	1,468.6	19	1,460.0	14	1,328.7
1984	59	5,085.3	25	1,794.5	20	1,801.3	14	1,489.4
1985	82	7,674.0	37	3,270.3	32	3,162.4	13	1,241.2
1986	96	9,923.6	45	4,336.1	35	3,625.8	16	1,961.7
1987	110	9,702.4	53	4,758.5	38	3,161.4	19	1,782.4
1988	117	11,435.2	56	6,141.7	40	3,620.8	21	1,672.6
1989	120	11,662.2	56	6,769.6	43	3,536.3	21	1,356.3
1990	119	8,737.1	58	5,551.6	43	2,549.2	18	636.3
1991	138	12,968.2	86	8,785.5	28	2,586.3	24	1,596.4
1992	142	15,912.0	89	11,171.1	30	2,772.8	23	1,968.1
1993	189	32,158.7	135	26,081.9	32	3,398.5	22	2,678.2
1994	226	44,306.0	175	38,812.0	29	2,502.7	22	2,991.3
1995	219	57,541.3	178	49,913.0	24	3,395.4	17	4,232.9
1996	199	88,776.3	166	78,302.0	20	4,778.6	13	5,695.8
1997	211	140,533.8	176	127,825.3	26	7,370.3	9	5,338.2
1998	210	138,301.4	173	126,904.5	28	6,480.7	9	4,916.2
1999	203	124,261.9	167	118,232.7	26	4,441.7	10	1587.5

In 1999, there were 203 REITs with a total market capitalization of $124 billion. Both the number of REITs and the market capitalization have declined somewhat since their respective peaks in 1994 and 1997. Eighty-two percent of REITs are equity REITs. According to Wellman (1999, p. 16), about 17 percent of U.S. REITs are apartment REITs. It is notable that given this relatively small current market capitalization of U.S. publicly-traded REITs, it is not possible for them to accommodate substantial increases in pension investments in real estate without considerable growth. In 1999, total pension assets in the U.S. were about $5 trillion (*Pension and Investments*, Jan. 24, 2000, http://www.pionline.com) so the entire publicly-traded REIT industry is only 2.5 percent of this. The bulk of REIT shares are held by individuals and mutual funds, although pension funds do invest in REITs, including equity REITs.

Advantages of U.S. REITs over Canadian REITs

U.S. REITs have the following principal advantages over Canadian REITs:

(1) their corporate status provides pension fund and other investors with complete liability protection, whereas the trust form of the REIT in Canada can, although admittedly with a small likelihood, expose the investor to unlimited liability risk;

(2) as long as they continue to meet the stringent asset and income tests, U.S. REITs can function as fully integrated companies that are able to finance, develop, own and manage real estate properties, whereas Canadian REITs are essentially limited to the latter two functions;

(3) the fact that existing U.S. REITs can issue new shares, whereas Canadian REITs are structured as closed-end mutual fund trusts, significantly improves the ability of U.S. REITs to finance new property acquisitions; and

(4) the UPREIT and DownREIT vehicles greatly facilitate the ability of REITs to acquire new properties by providing a deferral of tax to investors on property transfers into the REIT.

Title Holding Corporations[16]

Title holding corporations (THC) have been the ownership vehicles of choice for the majority of direct real estate investments by pension plans (Izeman, 1999). THCs are the investment vehicles in the U.S. that are most analogous to REICs in Canada. Every THC must have officers and directors and must be operated independently from the pension plans that are its shareholders. It is common for officers and employees of the real estate management firm that

[16]In addition to Krueger, 1996, see Iezman, 1999.

manages properties on behalf of pension plans to serve as officers and directors of the THC. Because THCs are corporations, they provide full liability protection to plan assets in the event of extraordinary catastrophic losses that might arise from the ownership of real property. THCs, if properly set up and maintained, are exempt from federal income tax and most states' income tax as well. Thus, THCs maximize the advantage deriving from the tax-exempt status of pension plans.

There are two types of THCs–one defined under section 501(c)(2) of the tax Code and one defined under section 501(c)(25). As discussed below, each type of THC has particular features that distinguish it. A pension plan can invest in either type of THC rather easily, and either type can serve as a vehicle for pension plan investment in most types of real estate.

Section 501(c)(2) Holding Corporation

This type of corporation must hold real estate exclusively and may not be owned by more than one pension fund or a group trust (see below)–it cannot be owned by a taxable entity. Because it has only a single shareholder, this type of corporation cannot be used to commingle the investment finances of a number of pension funds. The tax-exemption holds only for passive property income (rent) and does not include active business income that might derive from the ownership of property (e.g., income from operating a hotel or health care facility). There is a restriction on this type of corporation requiring that it not accumulate income at the corporate level so that it must pay out all of its income to the tax exempt pension fund. Care has to be taken that activities associated with property ownership–such as laundry, concierge, parking, vending machine and maid services–are structured as integral components of the primary real estate activities so that income deriving from these is not classified as unrelated business tax income (UBTI). UBTI will also arise if the pension fund uses leverage to finance a property acquisition because a section 501(c)(2) title holding corporation is not tax exempt on income from debt-financed investments. Thus, property acquisitions must be equity financed. The pension fund must pay the tax on any income declared to be UBTI. A section 501(c)(2) corporation can hold an indirect interest in real property, including a limited partnership interest or mortgages, however, a general partnership interest might be deemed to constitute carrying on a trade or business and cost the corporation its tax-exempt status. A section 501(c)(2) title holding corporation could lose its tax-exempt status if UBTI exceeds 10 percent of gross income for a year.

Section 501(c)(25) Holding Corporation

Unlike the previous type of corporation, this type of tax-exempt corporation may have up to 35 qualified tax-exempt shareholders. It may only hold direct title to real property, and can therefore not hold such indirect interests as mortgages, partnership interests or interest as a tenant in common (similar to a partnership). "Real property" includes personal property that is leased under or in connection with the real property so long as the rent from the personal property does not exceed 15 percent of the total rent. This type of corporation must also pay out

all of its income in the year in order to maintain its tax-exempt status. A section 501(c)(25) corporation may hold the stock of another section 501(c)(25) corporation but it must own 100 percent of the stock. A significant advantage of a section 501(c)(25) corporation over a section 501(c)(2) corporation is that the former may, with some limitations, use leverage when acquiring real estate without generating UBTI. It may also hold options to purchase real estate provided the options are intended for that purpose rather than for options trading. In addition, this type of corporation may hold reasonable cash reserves to meet its operating requirements, and initial cash contributions before investing in real estate as long as these contributions are held for less than a year. This corporation can also lose its tax-exempt status if it generates UBTI, other than debt-related UBTI, in excess of 10 percent of gross income for a year.

Comparison of Canadian REICs and U.S. Title Holding Corporations

The following table provides a summary comparison of the investment features of the Canadian REIC and the two types of U.S. Title Holding Corporations. In most respect, it would seem that the Canadian REIC vehicle is superior to either of the U.S. corporate vehicles. The main advantages of the Canadian REIC are:

(1) increased access to capital through commingling;
(2) less onerous management restrictions;
(3) much more flexible asset holding rules;
(4) and the ability to accumulate earnings for property improvement or acquisition purposes.

Because of the rules preventing pension funds from participating in active business activities in both Canada and the U.S., none of the vehicles is appropriate for property development purposes.

TABLE IV.2
COMPARISON OF CANADIAN REICs AND U.S. TITLE HOLDING COs.

	Canadian REIC	**U.S. 501(c)(2) Title Holding Co.**	**U.S. 501(c)(25) Title Holding Co.**
Limits on shareholdings by a fund?	No	No	No
Number of shareholders permitted	No limit	1 pension plan only	Up to 35 pensions and other tax-exempt shareholders
- Commingling of funds permitted?	Yes	No	Yes
- Partnership arrangements permitted?	No, to avoid foreign property designation	No	Yes
Management	Can be managed in-house or by outside management firm	Must operate independently of pension fund–usually outside management firm	Must operate independently of pension fund–usually outside management firm
Eligible investments	Real estate and other eligible investments under federal/provincial regulations–combined fund investments must meet quantitative and qualitative restrictions	Must hold real estate exclusively; can hold direct and indirect (e.g., mortgages, limited partnership units) interests; must meet ERISA prudency standards	May hold only direct (and not indirect} real estate interests; may also hold options and cash for operating and initial property investment purposes must meet ERISA prudency standards
Borrowing permitted?	Yes for real estate investment purposes	No, borrowing generates taxable (UBTI) income	Yes, for acquiring real estate
Tax exempt?	Yes	No	No
Must pay out income?	No, can accumulate income tax free	Yes, must pay out all income to avoid double taxation	Yes, must pay out all income to avoid double taxation
Unlimited Liability protection?	Yes	Yes	Yes
New property development permitted?	No, because of active business restriction on pension funds	No, because of active business restriction on pension funds	No, because of active business restriction on pension funds

Group Trusts

Two or more governmental or non-governmental pension plans or a number of qualifying individual retirement accounts can commingle their investment assets in a group trust under Revenue Ruling 81-100 and Tax Code section 401(a)(24). The group trust typically has a bank or trust company as trustee, however, the investment manager directs the investment of the assets. The group trust instrument must expressly provide that only qualified plans and individual retirement accounts may participate, and there must be a prohibition on the diversion of the trust's assets other than for the exclusive benefit of plan participants or their beneficiaries. The group trust must be a U.S. trust that operates solely within that country. The assets of a group trust are plan assets under ERISA and therefore are subject to fiduciary rules. Interests in the group trust cannot be transferable, but redemptions of interests are allowed.

A group trust is exempt from federal (and most state) income tax, but must file its own tax return for purposes of the UBTI rules and itself pay any tax owing. UBTI is therefore not passed through to the participating pension fund or other participating trusts, which is useful for pension funds that do not want to get involved in filing their own UBTI returns. Group trusts may be either open or close-ended, and it is quite common for them to make investments through title-holding corporations (see above) in order to provide greater liability protection to the retirement plans.

<u>Comparison of U.S. Group Trusts and Canadian Pooled Trusts</u>

As discussed in the preceding chapter, with the exception of pooled fund trusts, master trusts and regulation 5000(1)(c) quasi mutual fund trusts, Canadian pooled trust arrangements that could be used for pension fund investments in rental housing will be treated as foreign property. This will be an issue for funds that do not want to utilize scarce foreign property room. Investments in pooled fund trusts and the quasi mutual fund trusts have the advantage that, if used effectively, they provide a bump-up in the foreign property limit. However, the former type of trust has stringent income and asset restrictions that require constant monitoring to avoid penalties, while the latter type of trust imposes the added burden of requiring that a class of its units must be qualified for distribution to the public. Both of these types of trusts are also taxable so that earnings must be paid out to the pension fund unit holders each year to avoid double taxation. The master trust arrangement avoids those problems but it does not provide a bump-up in foreign property room and, indeed, only the master trust or the pension fund itself is permitted to invest in foreign property. Funds in Canada are forced to choose between flexibility in their pooled trust arrangements and non-taxability on the one hand, or gaining access to extra foreign property room while accepting more stringent restrictions, including taxability, on the other. Thus, it is not the trust vehicles in Canada that are the problem but the existence of the foreign property rules that add considerable extra restrictions and complexity. The issue apparently does not arise in the U.S. because there are no ERISA provisions known to the author that explicitly

place percentage limits on foreign investments. The following table summarizes the features of the various Canadian and U.S. pooled trusts.

TABLE IV.3
COMPARISON OF CANADIAN POOLED TRUSTS AND U.S. GROUP TRUSTS

	Canadian Pooled Trusts				
	Pooled Fund Trusts	**Master Trusts**	**Quasi Mutual Fund Trusts***	**Other**	**U.S. Group Trusts**
Unit holdings treated as foreign property?	No	No	No	Yes	n.a.
Provides bump-up in RPP's foreign property room?	Yes	No	Yes	No	n.a.
Stringent Income and asset tests?	Yes	No	No	No	Yes
Taxable?	Yes	No	Yes	Yes	No
Must pay out income to avoid double taxation?	Yes	No	Yes	Yes	No
Units must be made available to the public?	No	No	Yes	No	No

NOTE: *Quasi Mutual Fund Trusts qualifying under Regulation 5000(1)(c) of the Canadian *ITA*.

Bank-sponsored Collective Trusts

In the U.S., the Office of the Comptroller of the Currency regulations permit a national bank[17] to invest assets it holds as a fiduciary in a collective investment fund "consisting solely of assets of retirement, pension, profit sharing, stock bonus, or other trusts that are exempt from federal

[17]The U.S. has a dual banking structure with some banks regulated at the state level and some at the national level. There are more than 2,500 National Banks (http://www.occ.treas.gov/), most of them primarily commercial in nature, although some also maintain savings and trust functions.

income tax." Collective trusts are generally structured as group trusts (see above). There are stiff redemption requirements imposed on collective trusts. Because many banks had difficulty meeting these requirements in the liquidity crunch of the late 1980s and early 1990s, there are few remaining bank-sponsored collective funds investing in real estate (Kreuger, 1996).

Partnerships

Two types of partnership vehicles are potential candidates for real estate investments by U.S. pension plans–limited partnerships and general partnerships. An advantage of both types of partnership arrangements is that it they are passthrough vehicles for tax purposes (but see below). Another advantage of a partnership structure is that it may be eligible to leverage the financing of real estate investments without incurring UBTI tax (see below)

Limited partnerships (LPs) are one of the most popular vehicles because of the greater liability protection they can provide to a pension fund. If a pension fund is a limited partner in a LP arrangement, the liability of the plan investors is limited to their capital commitments and their share of the partnership's projects. Under the rules in most states, a limited partner may be able to exercise considerable rights over the operation of the partnership without jeopardizing its tax-exempt status. A tax-exempt organization that is a limited partner in a partnership will be subject to tax on any income derived from the unrelated trade or business activities of the partnership, and would be responsible for filing UBTI tax returns (see, Jacobson, 1993).

General partnerships expose partners to potentially unlimited liability risk. Moreover, each partner may have the apparent authority to enter into binding agreements on behalf of the partnership. Most pension funds are reluctant to expose their fiduciary responsibilities to such risks.

To qualify as a tax passthrough vehicle, a partnership must meet the partnership classification test, which requires that the partnership fail two of the following four "corporate" characteristics (Krueger, 1996):

(1) continuity of life;
(2) free transferability of interests;
(3) centralized management; and
(4) limited liability.

Generally, partnerships formed for pension investments in real estate rely on lack of continuity of life, and either lack of free transferability of interests or lack of limited liability.

<u>Comparison of U.S. and Canadian Partnerships for Rental Housing Investments</u>

There are no significant differences that I am aware of between the partnership vehicles in the U.S. and those in Canada that provide any particular advantage as far as rental housing investments are concerned. Both countries permit both general and limited partnership arrangements and both are able to invest in rental housing. As discussed in the preceding chapter, however, partnership arrangements in Canada are treated as foreign property. Thus, similar to the general case for trusts, the use of partnership arrangements in Canada to make domestic rental housing investments will use up scarce foreign property room.

Limited Liability Companies (LLCs)

In the U.S., LLCs are generally intended to combine the limited liability advantages of corporate status and the passthrough characteristics of partnerships. The operating agreement (or bylaws) for an LLC more closely resembles a partnership agreement than corporate bylaws; for example, an LLC can distribute income and capital in a manner other than in accordance with contributed capital. One advantage of a LLC over a limited partnership is that an LLC may provide passthrough partnership taxation treatment while allowing all members to participate in management without losing limited liability under applicable state law. LLCs must meet the partnership eligibility test (see above) and usually qualify by failing the corporate characteristics of continuity of life and free transferability of interests. If they meet the test, LLCs qualify for partnership treatment on income passthrough, UBTI and the real estate exception for debt-financing. The popularity of LLCs for collective investments in real estate by pension funds is limited considerably by the uncertainty arising for liability protection from the fact that not all states currently have LLC statutes.

<u>Comparison of the U.S. LLC and the Canadian Partnership and REIC Vehicles</u>

There are no LLCs in Canada. Partnership arrangements in Canada do not provide the unlimited liability protection of the LLC. The Canadian REIC vehicle is probably the most directly comparable vehicle since it provides full liability protection. A REIC has a number of choices in terms of management structure. It can manage a rental housing property in-house, rely on the services of a third-party property management firm, or utilize management expertise provided by another participant in the property investment such as another REIC or a pension fund. However, pension funds that actively engaged jointly in the management of a REIC might run the risk of being considered in partnership and hence subject to the foreign property rules. The LLC thus seems to permit more active joint participation in managing rental housing properties, if this is an issue in some instances. The LLC is inferior to the REIC in terms of taxability since the LLC must pay out all earnings in order to avoid taxation, while the REIC is actually tax exempt and can accumulate earnings tax free to be used for purposes of property improvement or acquisition.

C. Conclusions

The U.S. has a number of non-taxable vehicles that are not available in Canada. In some cases, these vehicles provide advantages for rental housing investments in comparison to available Canadian vehicles. For example, U.S. REITs have advantages over Canadian REITs in that: they can be incorporated and provide full liability protection; they can function as fully integrated companies that can finance, develop, own and manage rental housing properties; and, the UPREIT and DownREIT variants of the vehicles in the U.S. provide a deferral of tax to investors on property transfers into the REIT. Pooled fund trust arrangements are another situation where U.S. plans are at an advantage because the existence of the foreign property rules in Canada force pension funds to choose between flexibility in their pooled trust arrangements on the one hand, or gaining access to improved options for foreign property investments and accepting more stringent restrictions, on the other. In the case of investments through partnership vehicles, Canadian investors have the disadvantage that partnerships are treated as foreign property and consume valuable foreign property room. In other respects, there do not appear to be any significant advantages to the partnership vehicles in either country for rental housing investments. In the case of the LLC investment vehicle in the U.S., investors are provided with full liability protection, unlike partnership arrangements in the U.S. or Canada, while being able to participate jointly in the active management of the rental housing projects, unlike in the case of the Canadian limited partnership vehicle. The Canadian REIC does, however, have the advantage that it is tax exempt and can accumulate earnings tax free to be used for purposes of property improvement or acquisition, while the LLC must pay out all earnings to avoid double taxation. Canadian REICs also appear to be superior to U.S. Title Holding Corporations since they provide increased access to capital through commingling, less onerous management restrictions, much more flexible asset holding rules, and the ability to accumulate earnings for property improvement or acquisition purposes.

CHAPTER V: MODERN PORTFOLIO THEORY AND RENTAL HOUSING INVESTMENTS

A. Introduction

The purpose of this chapter is to highlight in very general terms the potential implications of modern portfolio theory (MPT), and the specific major portfolio selection models that have evolved under that rubric, for pension fund investments in rental housing. Specifically, it assesses in light of current empirical evidence on the values of key parameters, the theoretical considerations that might have an impact on a pension fund investment manager's decision to either include or exclude rental housing investments when developing a portfolio investment plan and strategy. The chapter begins in the next section with a brief overview of the evolution of modern portfolio theory, including a description of the major portfolio models. Then it examines the evidence on the risk-return characteristics of rental housing investments that would relate directly to their attractiveness as portfolio investments for pension funds. The chapter concludes with a brief summary.

B. The Evolution of Modern Portfolio Theory

Mean-Variance Analysis for Single Assets

Finance theory originally concentrated on the risk-return characteristics of single assets. The fundamental behavioural assumption underpinning both early analysis and MPT is that investors are risk-averse and will only assume additional risk if they are compensated by higher expected mean returns. Conversely, a higher expected mean return can only be acquired by an investor who accepts greater risk. Risk in this context refers to the potential variability of returns. It is measured by the degree to which expected returns could deviate from their mean expected value and is typically expressed by the variance or standard deviation of returns. This type of analysis was therefore commonly referred to as mean-variance analysis. An investor's tolerance for risk relates to the proportion of his investment that he is willing to expose to loss in order to achieve a specific rate of return. An asset that was undervalued in comparison to its expected risk-return profile would be bid up in price until its expected rate of return was consistent with its expected risk. The opposite would occur in the case of an overvalued asset. Such behaviour reflects efficiency in markets, which is an underlying assumption of most modern finance analysis. When the focus was on individual assets, detailed attention was paid to the "financial analytics" or the plethora of firm-specific information that might affect future returns of an asset and their volatility, including capital structure, quality of management, industry, dividend policy, debt leverage and so on.

Mean-Variance Analysis in a Portfolio Setting

Modern portfolio theory deriving from the insights of Markowitz (1959) shifted the focus of attention away from the risk-return characteristics of individual assets to the overall risk of a portfolio. According to this view, a key determinant of the value of an asset is the way in which its returns correlate with those of other assets in a portfolio in which it is included. The degree of correlation among assets measures the extent to which their returns move in the same direction (positive correlation) or opposite direction (negative correlation) at the same time. Thus, the value of a security to a portfolio could be evaluated by three relatively straight-forward measures--its mean expected return, the variability of its returns (variance or standard deviation) and the correlation of its returns with those of other assets in a portfolio (the covariance matrix among assets in the portfolio).

Taking the perspective of the overall portfolio, rather than that of an individual asset, it was no longer necessarily the case that higher volatility in an asset's returns was a negative factor that would exactly offset the higher expected return of the asset in comparison to a less risky asset. What was of fundamental importance was the way in which the asset's returns offset or augmented volatility in returns of other assets in the entire portfolio.

While the mathematics gets complicated when there are many assets, the basic idea of diversification that can reduce overall risk of a portfolio can be expressed in two simple equations relating to a portfolio of two assets. In the equations, μ refers to the mean return, σ refers to the standard deviation in returns and the numerical subscripts refer to the individual assets. Equation 1 shows that the mean expected return of a portfolio of assets is equal to the sum of the individual means. (As discussed below, the literature on MPT has even demonstrated that it is possible to achieve a return greater than the sum of the individual returns, through appropriate portfolio selection and leveraging.)

$$\mu_{1+2} = \mu_1 + \mu_2 \qquad \textbf{(1)}$$

Equation 2 shows, however, that the standard deviation of the expected return of the portfolio is less than the sum of the variability of the individual assets because assets with zero or negative correlations would reduce the overall variability of the expected returns for the portfolio.

$$\sigma_{1+2} < \sigma_1 + \sigma_2 \qquad \textbf{(2)}$$

To demonstrate the potential reduction in portfolio risk, consider the following fundamental equation of portfolio risk (σ_p)

$$\sigma_p = \sqrt{a^2\sigma_1{}^2 + b^2\sigma_2{}^2 + 2Cab\sigma_1\sigma_2} \qquad (3)$$

where a and b are the value-weighted shares of, respectively, asset 1 and asset 2 in the portfolio, σ_1^2 and σ_2^2 are the variances of the two assets, and C is the correlation coefficient between the yields of the two assets. Examination of a few polar cases is instructive.

As a first case, consider two assets that are perfectly positively correlated (C=1), the equation for portfolio risk reduces to $\sigma_p = a\sigma_1 + b\sigma_2$, so that the portfolio risk is the simple sum of the value-weighted risks of the individual assets. There are no benefits to portfolio diversification in this case.

As a second example, consider the case in which both assets are perfectly negatively correlated. Then portfolio risk is $\sigma_p = a\sigma_1 - b\sigma_2$ so that the risks of the two assets tend to offset each other. If in this case the assets are held in the portfolio in inverse proportion to their standard deviations $(a / b = \sigma_2 / \sigma_1)$, then $\sigma_p = 0$, so there is no risk associated with the portfolio.

As a final example, consider the case where the assets are completely uncorrelated so that C=0. In this case, portfolio risk is $\sigma_p = \sqrt{a^2\sigma_1{}^2 + b^2\sigma_2{}^2} < a\sigma_1 + b\sigma_2$; in other words, the portfolio risk is less than the value-weighted sum of the risk of the individual assets so that there is a risk reduction through portfolio diversification. The upshot is that correlations among the returns of individual assets is more important to portfolio selection than the separate riskiness of the assets.

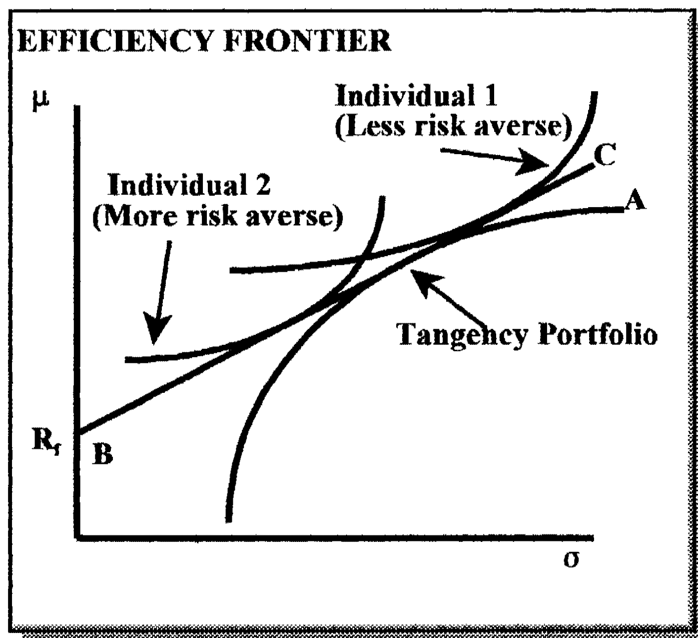
The insights of Markowitz started a revolution in finance and portfolio selection theory that continues to burgeon to this day. These insights turned attention away from the plethora of firm-specific information that was previously taken to be of dominant importance to the three measures relating to expected returns and their oscillations. Of course, detailed firm-specific information was relevant to the extent that it might affect predictions of the magnitude and variability of future returns from past return data. But, the focus of attention clearly shifted from the minutiae of information impacting a firm's day-to-day operations to the three broad summary statistics that affected the way an asset interacted with other assets in a portfolio setting.

Under MPT, asset allocation is the primary determinant of portfolio performance with market timing and security selection playing minor roles. The goal of portfolio management was to achieve the highest rate of portfolio return for a given degree of portfolio risk that was acceptable to the investors, or alternatively, to minimize the portfolio risk associated with a target level of portfolio return. To achieve this, it was not sufficient to choose many securities

that had desirable risk-return characteristics in an individual setting; it was also necessary to invest in securities with low covariances among themselves.

The Efficiency Frontier

The concept that there is a maximum rate of return attainable for each level of risk assumed by investors gives rise to the concept of the "efficient frontier" relating risk and return. Only portfolios on this frontier are potential candidates for selection since portfolios beyond the frontier are unattainable while those inside the frontier yield either too low a rate of return for the degree of risk assumed, or result in too great a level of risk for the level of return achieved. If we make the assumptions (undoubtedly heroic) that there is a risk-free asset yielding a certain rate of return and that all investors can borrow at the risk free rate, it is possible to extend the efficient frontier in the manner expressed in the following diagram. Curve A shows the efficiency frontier for the risky assets, R_f shows the risk-free rate of return and the line BC shows the efficient risk-return trade-off when the risk-free asset and the ability of investors to borrow at the risk-free rate are taken into account. The line BC is commonly referred to as the capital market line (CML). The point of tangency between line BC and curve A is at the "tangency portfolio." Any point on BC is attainable simply by the investor choosing the appropriate combination of the risk-free asset and the tangency portfolio. Points along BC past the point of the tangency portfolio are obtained by the investor leveraging–that is, by borrowing at the risk-free rate and acquiring additional units of the tangency portfolio. This is consistent with Tobin's (1958) separation theorem, which showed that the proportionate composition of non-cash assets in a portfolio is independent of their aggregate share of the investment balance.



The slope of BC is determined solely by the risk-free rate of interest. The point an investor chooses along BC is determined by his degree of risk aversion as determined by his risk-return utility function. In the diagram, individual 1 is relatively less risk averse while individual 2 is relatively more risk averse. Since the line BC extends beyond the point of tangency with curve A, the diagram illustrates that (with the presence of the risk-free asset) portfolios that provide a yield greater than the simple sum of the individual returns of the various combinations of risky portfolios are attainable. This includes all points along line BC beyond its point of tangency with curve A. Thus, through leveraging with the risk-free asset, not only is portfolio risk lower than the sum of the riskiness of the individual assets in the tangency portfolio, but the portfolio return can be greater than the sum of the individual returns as originally expressed in equation 1 above.

While, it is theoretically appealing to estimate the efficiency frontier based on mean-variance analysis of portfolios of risky assets, in practice, this has proven to be a statistical impossibility, primarily because of the virtually infinite number of variances and covariances involved. Recent research within the traditional Markowitz framework has also demonstrated that the efficiency frontier is not singular but "fuzzy" and may consist of many statistically indistinguishable frontiers (Gold, 1995). The approach is therefore most commonly used by portfolio managers to achieve the more modest goal of improving the risk-return characteristics of specific portfolios they are putting together. Even this more modest objective is not unconditionally recognized as feasible (see, for example, Cheng and Liang, 2000).

The Capital Asset Pricing Model (CAPM)

Development of the CAPM is commonly credited to Sharpe (1964). Sharpe was actually trying to identify the tangency portfolio. In the pure form of the CAPM, every investor is assumed to be concerned only with risk and return, and to have the same information and to analyze and process it in the same way. There will no disagreement about prices of assets, given the common assessments about their underlying risk and return. In such a world, each individual would construct the same set of efficient risky portfolios. If an asset's price did not accord with the common view of its intrinsic value, it would be bid up or down in price until equilibrium was achieved. The model is therefor an equilibrium model and has the implication that every asset is efficiently priced given the common perceptions about its expected returns and risk.

The startling conclusion of the CAPM is that the tangency portfolio is the market portfolio, which was originally taken to be a broad-based measure of all securities (but see below). Individuals could leverage by lending or borrowing at the risk-free rate of interest, given their own unique preferences and degree of risk-aversion, but everyone would hold the same portfolio of risky assets, which would be, depending on their wealth and degree of risk-aversion, a lesser or greater chunk of the market portfolio. A disequilibrium could only be a temporary phenomenon. Suppose, for example, that a new stock appeared. If at current prices it

constituted say 10 percent of total asset values but the common perception was that it should constitute 15 percent of the market portfolio, the price of the asset would be bid up thereby driving the rate of return down. Equilibrium would be reestablished only when risk and return were such that the asset's share of total market value was equal to the shared perception of the recommended proportion that the asset should constitute in the tangency portfolio. The tangency portfolio therefore will always be a value-weighted mix of all assets. Moreover, the market portfolio will be mean-variance efficient. While in theory the tangency portfolio should include all assets, including stocks, real estate, intangible assets, human capital and so on, in empirical work, it is typically taken to be a broad-based stock market index such as the Standard and Poor 500 index or a more narrowly based proxy index for the overall market such as the Dow Jones industrial average.

The implication of the CAPM for the investor is that he need not actually perform the mean-variance analysis–the calculations required to estimate the tangency portfolio have already been performed for him by the market. This neatly circumvents the intractable statistical problems associated with estimating the tangency portfolio and the CML directly from asset means and variances.

What does the CAPM imply for the valuation of specific assets? Let, R_i, R_f and R_m be the holding period rates of return on, respectively, assets i, the risk-free asset and the market portfolio, and let e_i be an error term. Then we can express the relationship between the excess return (that is the return over the risk-free rate) on asset i and the market portfolio by the following equation.

$$R_i - R_f = \alpha_i + \beta_i (R_m - R_f) + e_i \qquad (9)$$

In words, the excess return on asset i is equal to a constant (α) plus some fraction (β) of the difference between the market return and the risk-free return. In principle under the CAPM the "alpha" value for an asset (also referred to as idiosyncratic, non-systematic or diversifiable risk) should be zero in equilibrium. It measures the excess return on the asset when excess market return is zero (ignoring the error term). A positive α is an indication to investors that the price of the asset is undervalued, relative to the risk and return of the market portfolio; as a result, investors would try to acquire more of the asset thus bidding up its price until the equilibrium return was established. A negative alpha would signify the opposite and would result in the price of the asset being bid down.

The beta value for an asset (also commonly referred to as market, systematic, or nondiversifiable risk) measures the way in which the asset's excess return oscillates as the market return deviates over time from the risk-free rate of return. The beta for an asset, most often a stock, is

The important issue in the present context and for portfolio management generally is the effect that a stock's beta has on its attractiveness to the construction of a portfolio. Since under the CAPM the only nondiversifiable risk is market risk, which is expressed by an asset's beta value, both the portfolio rate of return and the portfolio risk will simply be weighted averages of the returns and risks of the individual assets in the portfolio, with the weights equal to the value-share of the asset in the portfolio. This is expressed in the following equation, where w_i is the asset's weight.

$$R_p = w_i \sum_i R_i \quad \textit{and} \quad \beta_p = w_i \sum_i \beta_i \qquad \textbf{(12)}$$

The implications of the CAPM is therefore that the investor can put together a portfolio with whatever risk-return characteristics he desires. Consider, for example, the information in the following table.

TABLE V.1
DETERMINATION OF PORTFOLIO RISK UNDER THE CAPM

	Asset				
	1	**2**	**3**		
R	0.1	0.15	0.2	**Portfolio**	
β	0.3	1	2	**R**	**β**
w's: Portfolio A	0.7	0.3	0.1	0.135	0.71
w's: Portfolio B	0.1	0.3	0.7	0.195	1.73
w's: Portfolio C	0.1	0.8	0.1	0.15	1.03

Portfolio A, the safe portfolio, invests heavily in the safe asset, moderately in the medium risk asset and lightly in the risky asset, for a portfolio return of 13.5 percent and a portfolio beta of .71. Portfolio B, the risky portfolio, invests heavily in the risky asset, achieving portfolio return and risk of 19.5 percent and 1.73. Portfolio C the moderate risk portfolio, invests heavily in the medium risk asset and achieves a return and risk of .15 and 1.03. By leveraging through the safe

asset, an investor's choice menu can extend well beyond the possibilities achievable through the many possible combinations of the risky assets. For example, suppose the risk-free rate of interest is 12 percent, an investor who leveraged half of his portfolio value and invested the extra revenue in the risky asset could achieve an expected portfolio return of 23.25 percent (i.e. 1.5(.195)-.5(.12)) but his portfolio beta would increase to 2.60 (i.e. 1.5x1.73), which is more than two and a-half times the market risk. The choice of these or other possibilities will depend on the investor's risk aversion, or ability and willingness to tolerate risk in order to achieve higher return.

The CAPM was the dominant portfolio model until about the mid-1980s. While most researchers have moved beyond the CAPM to more complex models of both the determination of asset value and portfolio selection, the model nevertheless continues to have influence on the investment decisions of investors and portfolio managers. Under the CAPM approach to portfolio selection, the attractiveness of rental housing investments for pension funds will depend crucially on the return and beta characteristics of such investments and on the overall portfolio risk and return combinations sought by pension managers. It will also depend on the ability of pension funds to achieve their target levels of risk and return by investing in other assets that may be inherently less administratively demanding than rental housing investments.

Arbitrage Pricing Theory

The arbitrage pricing theory (APT) model, developed originally by Ross (1976) resolves many of the deficiencies of the CAPM. Like the CAPM, the APT model is based on the assumption that the discount rate (i.e., the stream of returns to asset value) for an asset are determined by the systematic risk exposure of the asset, not the total risk. As with the CAPM, the APT model assumes that firm-specific forces that can influence the return on any individual asset (the alpha risk), tend to cancel out in large and well-diversified portfolios. Unlike the CAPM, however, the APT model does not assume that all investors are alike, that the market portfolio is the only risky asset that will be held, or that market risk is the only source of systematic risk. Rather, APT admits of multiple sources of systematic risk; as a result, models within this framework are sometimes also referred to as multi-risk or multi-factor models.

Under the APT, the expected return for each asset is described by a linear combination of risk factors. Risk factors are also considered to affect the realized returns of the market portfolio, or indeed all assets and groupings of assets. The APT model is not fully deterministic in the sense that there is no solid consensus on the precise factors considered to affect risk. While the CAPM recognizes only market risk, which is expressed in an asset's sole beta value, the APT model recognizes multiple beta values, which reflect multiple risk factors. The pattern of betas for an asset or portfolio is called its "risk exposure profile." Academic and commercial research indicates that the following are major risk factors:

- investor confidence;

- interest rates;
- inflation;
- real business activity;
- and stock market activity.

The exact measure chosen to be a proxy for each of these (such as a conventional macro variable of industrial production, a particular measure of term structure of interest rates, or a statistically constructed index of investor confidence) will depend on the circumstances of the analysis, the nature of the asset involved and the objectives of the investor.

The following equation summarizes in somewhat simplified form the basic intuition of the APT model.

$$\begin{aligned} R_i - R_f &= \alpha_i + \beta_{i1} F_1 + \beta_{i2} F_2 + \ldots + \beta_{ij} F_j + e_i \\ &= \alpha_i + \sum_j \beta_{ij} F_j + e_i \end{aligned} \tag{13}$$

In the equation, β_{ij} is the risk exposure or beta of asset i to risk factor j , F_j is the price of risk or the risk premium for the jth risk factor, and as before R_f is the risk-free return. The expectation for both the alpha and the error terms is zero. Risk prices can be negative or negative. If a portfolio is not exposed to any risk factors (i.e., all $\beta_{ij} = 0$), the expected return is the risk-free return.

An asset's risk exposures are rewarded in the market by appropriate adjustments to expected return. As with the CAPM, the risk exposure of an asset will determine an equilibrium premium or discount on its return that is in-line with the return-risk exposure of the market (typically again represented by a broad-based market index). The risk profile also indicates how an asset is expected to perform under different economic circumstances and investment climates–for example, if interest rates, inflation rates, aggregate demand or investor confidence change.

Many APT models have been used to study real estate investments (see, for example, Wurtzebach *et al*, 1991 and Brueggeman *et al*, 1984). Brueggeman *et al*, utilizing an arbitrage pricing model in which real estate performance is judged relative to a market index, demonstrate that when real estate is added to a mixed-asset portfolio, the inflation risk of the expanded portfolio is substantially reduced. Wurtzebach *et al* using a two-factor model (measures of inflation and real estate market balance as evidenced by vacancy rates) also find that real estate provides an effective inflation hedge, and does so primarily when the real estate market supply and demand equation is in balance. Thus, their research shows that to achieve inflation hedging properties of real estate, portfolios must consist of properties in balanced markets (i.e., well leased at market rental rates). When market imbalance occurs, returns suffer regardless of inflation.

The APT model is quite naturally not without its critics. Shanken, (1982, 1985), for example, has argued that the model is so imprecise that it is impossible to empirically test whether or not the model is correct, particularly in a world in which assets markets are in disequilibrium and constantly adjusting to shocks and unexpected changes. Nevertheless, virtually every major portfolio manager today consults an optimization program, even if they don't strictly adhere to it, and most of those models have been hugely influenced by the multi-risk APT conceptual framework (as well as by its single-risk antecedent, the CAPM). The APT is especially useful for constructing portfolios that are adapted to particular needs of investors since it permits the manager to choose the categories of risk that present the greatest threat, given the particular needs of the investor and to construct the portfolio accordingly. This is particularly relevant to pension fund managers who must be able to meet their payout commitments based on retirement projections for their beneficiaries.

Exchange Rate Risk: the ICAPM and IAPT Models

The CAPM is based on the assumption that the nondiversifiable risk of any asset is measured by its beta risk against a broad-based market index. In the APT model, market risk continues to be a major risk factor although the model includes other risk factors as well. In the domestic versions of both these models the benchmark market portfolio includes only domestic assets. The CAPM and the APT have both been extended to an international setting in research by, respectively, Dumas and Solnik (1993) and Harvey (1995). The international versions of the CAPM and the APT differ from their domestic versions in that the market benchmark for the later is the world or broad-based international portfolio of assets. While the empirical results are mixed, this and subsequent research generally shows that the international CAPM (ICAPM) and international APT (IAPT) are better than the domestic versions at explaining market risk of assets.

The essential theoretical difference between the domestic and international versions of the models is that the latter incorporate exchange rate risk, either directly or indirectly through the use of instrumental variables, or by contrasting the performance of models that include proxies for the world market with those that include proxies for the domestic market. Thus, exchange

rate uncertainty is priced to the extent that it represents pervasive risk. While there undoubtedly continue to be barriers to international investing (see, Feldstein and C. Horioka, 1980 and Feldstein, 1994), it is natural that there would be some influence of international factors on asset pricing. Harvey (1995) simplified the trade risk factor by the use of a two-factor ICAPM in which index returns were regressed on the Morgan Stanley Capital International (MSCI) world market portfolio and a trade-weighted sum of investments in 10 currencies. Incorporating international risk in portfolio models can give rise to substantial benefits to investors; De Santis and Gerard (1997) found that the expected gains from international diversification for a U.S. investor average 2.11 percent per year and have not significantly declined over the last two decades. The author is not aware of research studies measuring the advantages of international portfolio diversification specifically from the perspective of Canadian investors.

The Implications of Derivatives

The use of financial derivatives by investors and portfolio managers has proliferated in recent years (Merton, 1995). They are commonly used by banks, insurance companies, investment firms, commercial businesses, local governments and pension funds. Derivatives are financial instruments whose value is determined by the value of an underlying asset (such as a stock price), rate (such as an interest rate or a bond yield) or index (such as the S&P 500 or the TSE 300). While the financial industry is constantly inventing ever more exotic variants of financial derivatives, most can be classified into one (or some combination) of the following four categories: options; swaps; futures; and forwards; An option contract gives the holder the right to buy or sell an asset by a certain date at a specified price. A swap contract commits parties to exchange future cash flows according to some predetermined formula. A futures contract is an agreement to buy or sell an asset on a specified future date at a predetermined price. A forward contract is similar to a futures contract but is not traded on an exchange; it is usually a legal agreement between two specified parties such as a financial institution and a corporation.

Derivatives have acquired somewhat of a bad name recently as they have been used to speculate in situations that have resulted in spectacular failures and loss of investment capital. However, the use of financial derivatives as speculative instruments is secondary to the fundamentally important role they play in risk management (Scholes, 1981 and Stoll, 1985). Derivatives permit organizations to isolate different types of risks into smaller and smaller components and to buy and sell those in a manner consistent with their underlying risk-management strategy in order to achieve overall objectives. An organization can decide what types of risks it is prepared to retain, and what types of risks it should hive off to other organizations that have different objectives, constraints or tolerance for those particular types of risk. Of course, in a portfolio context, it is the net effect that a particular derivative has on the overall risk of the portfolio that is important. This can only be assessed in light of the precise risk characteristics of all of the assets in the portfolio.

In the case of a pension fund, for example, the use of derivatives could play an important role in the development of an overall risk strategy that would maximize the likelihood that they would

be able to meet payout commitments and thereby satisfy regulatory requirements. Derivatives can be used by a pension fund to protect bond or stock values against future interest rate increases, to reduce the exposure of foreign investments to future appreciation in the domestic currency, or to provide a floor to stock or commodity price declines resulting from a softening in the market. For example, while a pension fund could sell a declining stock and repurchase it later, the portfolio managers can instead hedge with stock index futures contracts or stock index option contracts. This eliminates incurring trading commissions and accomplishes the same result. Since most financial derivatives are freely traded in open markets, an organization that is willing and able to bear a particular type of risk at the minimum cost will become the risk holder. Derivatives therefore have the potential to make a substantial contribution to improved market efficiency.

Derivatives are frequently used in real estate portfolios. Oppenheimer (1996) demonstrated that a REIT portfolio could be hedged successfully with stock and Treasury future contracts to reduce the systematic risk. In an interesting study, Liang and Webb (1996) demonstrate that hedging can be used in a real estate portfolio to proxy the risk-return characteristics of conventional stock/bond portfolios. For example, the risk-return profile of a portfolio comprised of 44% U.S. commercial real estate, 26% U.S. common stocks, 19% international common stocks, and 11% U.S. bonds could be the same as that of a traditional portfolio of 60% stocks and 40% bonds.

It is notable that the use of derivatives by pension funds is taken very seriously by the regulatory authorities. In addition to providing detailed guidelines relating to portfolio risk and portfolio diversification for pension plans, the Office of the Superintendent of Financial Institutions in Canada also sets out very specific instructions on the use of derivatives (OSFI, April 2000 and OSFI, undated). For example, the first document contains the following instructions.

> The SIP&P should relate the use of derivatives to the objectives of the fund and the obligations of the pension plan. If the use of derivatives is authorized, the SIP&P should: list the acceptable derivatives instruments; state the proportion of asset portfolio that may be so allocated; indicate the purpose (hedging, index replication, etc.) for which they are to be used; identify which managers are authorized to use derivatives, and set trading limits; indicate where the products are to be obtained; describe how over-the-counter products are to be managed. Plan administrators should understand how the use and risks of derivatives will be measured for their plan and document this understanding in their policies.

C. <u>Evidence on the Risk-Return Characteristics of Rental Housing Investments</u>

Some earlier empirical evidence suggested that real estate returns for both the U.S. and Canada have historically compared favourably on a risk-adjusted basis with those of stocks and bonds (Hamilton and Heinkel, 1994, p. 36). Evidence also suggested that the low correlation between real estate returns and those of other asset classes meant that there are gains through

diversification if real estate holdings are included in a portfolio (see Webb and Rubens, 1986 and Friedman, 1970). More recent and more broadly based empirical evidence (see data and references below) calls into question the first assertion but does lend some support to the second.

Table V.3 relating to the U.S. compares real estate, stock and bond returns over a relatively long eighteen-year period (1978-96). For all segments of the period, stock returns dramatically outperform returns to real estate. Over the entire eighteen-year period, real estate returns were only 55 percent those of stocks. The picture was particularly grim for the period 1993 to 1996 when the returns to real estate were actually negative (-2.9 percent). Indeed, except for the brief period 1994-96, long-term bonds, which are considerably less risky, even earned substantially higher returns than real estate. Most tellingly, over the most recent decade, bonds earned almost three times the return of real estate.

If the data is extended to the latest period available, the comparative under-performance of real estate, relative to stocks, does not improve.[18] From 1997(Q1) to 2000(Q3), the NCREIF total property index increased by 40.5 percent while the S&P 500 total return index increased by 104.7 percent. Moreover, if data for rental housing is isolated from the total real estate index, the performance is even poorer since the total return index for apartments increased by only 34.7 percent over the period (calculations by author).

[18]The author did not have access to a total return index for bonds for the most recent period.

TABLE V.3
COMPOUND ANNUAL NOMINAL RATES OF RETURN FOR U.S. REAL ESTATE, STOCKS AND BONDS: VARIOUS PERIODS; 1978-96

	1978-96	1986-90	1991-93	1994-96	1986-96
NCREIF (NPI) Property index	8.7%	7.2%	-2.9%	8.0%	3.8%
S&P 500 Index	15.8%	13.2%	15.6%	19.7%	15.6%
Lehman Brothers Long-term Bond Index	10.2%	10.8%	14.6%	6.2%	10.6%

Source: Derived from Ronald W. Kaiser, *Why Pension Funds Should Invest in Real Estate Now*, Special Report, Bailard, Biehl & Kaiser, Inc., 2000, p. 3.
Note: NCREIF (NPI) stands for the National Council of Real Estate Investment Fiduciaries (National Property Index). It is constructed on the assumption that properties are not leveraged. Property types include apartment, industrial, office and retail. Each property's return is weighted by its market value. Total Return: includes appreciation (or depreciation), realized capital gain (or loss) and income.

Table V.4 below reports real returns and volatility of returns (standard deviation) for unhedged and hedged (see note to table) real estate and equities for a selection of countries, including Canada and the U.S., using a completely different data set–the Datastream property indices for each country except the U.S. and the NAREIT Equity Index in the case of that country. The data relating to the U.S. (last row of data) supports the earlier conclusion for that country. The unhedged real return for real estate securities averaged 1.45 percentage points below that of domestic equities. When U.S. real estate securities' returns are hedged against the investor's domestic market, based on the estimated beta value, the results are even considerably grimmer–stock returns are over four times greater.

The situation for Canada (third row of data), while less painful, also supports the contention that stocks have performed better. Unhedged real estate securities returns averaged only 2.68 percent versus 3.33 percent for equities. Hedging does, however, reverse this situation for Canada since it raises returns for real estate to 3.64 percent, .31 percentage points above those for the equity market. Of course, the hedged result would have to be compared to hedged returns for other industries and subgroups of stocks to be fully meaningful–it may well be that real estate would still be a comparative under performer. The results for the other countries in the sample generally support the same conclusion. In all countries except Australia and Singapore, stocks outperformed unhedged real estate returns.

TABLE V.4
ANNUALIZED REAL RETURNS AND STANDARD DEVIATIONS FOR SELECTED COUNTRIES: REAL ESTATE VS EQUITIES: 1980-97

	Unhedged Real Estate Securities		Hedged Real Estate Securities		Equities	
Country	**Return**	**Std. Dev.**	**Return**	**Std. Dev.**	**Return**	**Std. Dev.**
Australia	6.50	34.12	3.67	17.79	3.99	27.00
Belgium	4.61	29.63	2.76	19.89	5.26	21.77
Canada	2.68	44.21	3.64	27.23	3.33	18.19
France	2.69	40.73	2.07	25.37	5.15	26.61
Italy	2.85	33.65	0.33	21.75	5.94	32.31
Japan	2.06	40.11	1.65	19.95	2.26	24.96
Netherlands	2.18	14.46	0.3	10.82	6.04	18.96
Singapore	3.52	51.47	1.32	18.50	2.84	31.88
U.K.	4.13	26.16	1.28	15.44	5.84	20.98
U.S.	4.32	13.82	1.38	11.04	5.77	17.9

Source: Simon Stevenson, "International Real Estate Diversification: Empirical Tests Using Hedged Indices," *Journal of Real Estate Research*, 19(1/2), 2000, 105-131, Exhibit 1.
Note: The hedged real estate series is derived by regressing the unhedged real estate returns against the country's equity market and then subtracting off from the total return the estimated component of return that is attributable to own-country systematic risk. Systematic risk is based on the estimated real estate "beta" value.

The standard deviations for unhedged real estate returns in Table V.4 show that they are generally more volatile than returns to equities. This is the case for eight of the ten countries reported in the table, including Canada. However, the standard deviations for hedged real estate returns are lower than those for equities for all countries except Canada, although the earlier

proviso about the possibility of hedging other portfolios of equities should be reemphasized. In Canada, the standard deviation for hedged real estate returns is still 50 percent higher than for equities. Thus, unhedged real estate returns in Canada appear to be both lower than those of equities and substantially more risky, while hedged real estate returns may be marginally higher but are still riskier.

Estimates, based on research primarily for the U.S., show that market-beta values for real estate are very low (far less than 1), indicating that including real estate assets in a conventional stock portfolio can moderate its risk profile (see, Webb and Rubens, 1987, and Firstenberg *et al*, 1988, Chandrashekaran, 1999). These estimates have been questioned on the grounds that they are frequently based on smoothed appraisal data rather than actual market transaction prices. While betas for equity REITs are typically somewhat higher, even these are usually significantly less than 1. Liang *et al* (1995), for example, estimated beta to be .544 for equity-REITs in the U.S. and found that the beta value declined over the estimation period.

Table V.5 below sheds considerable light on the international risk associated with investments in Canadian real estate from the perspective of investors in selected foreign countries. The table breaks total risk down into domestic (i.e., Canadian)-based risk and risk associated with fluctuating currencies. Take the perspective of a U.S. investor in Canadian real estate–the last row in the table. In the case of unhedged securities, domestic risk accounts for 93 percent of total risk while currency risk accounts for 14 percent. Note that the total does not necessarily sum to 100 because of positive or negative covariance between the two sources of risk. It is notable that, with the exception of investments from the Netherlands and to a far lesser extent the U.K. and Belgium, currency risk is a relatively minor concern in the case of unhedged investments. In the case of hedged investments, after systematic movement with the domestic market is factored out, currency risk becomes a much more significant component of total risk (except for the Netherlands). This is to be expected since the overall risk of the investment is reduced through hedging while the currency risk remains the same and therefore becomes a larger percentage of the total risk. For example, the high level of currency risk in the case of the Netherlands is essentially the same, while it rises to 41 percent, 37 percent and 33 percent in the case of, respectively, the U.K., Belgium and Japan. Undoubtedly of most importance to Canada, however, is the fact that in the case of U.S. investments in Canadian real estate, exchange rate risk remains a relatively small though not insignificant concern, at just under 20 percent.

Of course, currency risk, like all forms of risk, can be hedged. But not without a cost to the investor, particularly if the currency hedged is perceived as being weak.

TABLE V.5
RISK ASSOCIATED WITH INVESTMENT IN CANADIAN REAL ESTATE FROM THE PERSPECTIVE OF INVESTORS IN SELECTED COUNTRIES: 1980-97

	Unhedged Real Estate Securities			Hedged Real Estate		
	Domestic Risk	Currency Risk	Covariance	Domestic Risk	Currency Risk	Covariance
	Percentage of Total Risk			Percentage of Total Risk		
Australia	82.33	11.05	3.31	66.82	29.80	1.69
Belgium	92.30	25.30	-8.80	64.20	36.72	-0.46
France	93.42	13.94	-3.68	71.14	24.95	1.96
Italy	84.84	15.83	-0.33	63.80	26.47	4.87
Japan	78.87	13.05	4.04	55.44	32.80	5.88
Netherlands	72.15	73.35	-22.75	40.91	72.56	-6.74
Singapore	98.38	2.33	-0.35	79.56	11.98	4.23
U.K.	82.23	25.11	-3.67	50.17	41.04	4.39
U.S.	92.94	14.13	-3.54	80.07	18.73	0.6

Source: Derived from Simon Stevenson, "International Real Estate Diversification: Empirical Tests Using Hedged Indices," *Journal of Real Estate Research*, 19(1/2), 2000, 105-131, Exhibit 3.

There is a great deal of other accumulated evidence about the other risk factors for real estate investments, although much of it is for the U.S. Bond and Seiler (1998) in a study over the 1969-94 period found that residential real estate was a significant hedge against inflation. This enhances its attractiveness in portfolios since other financial assets are not good inflation hedges in periods of high unexpected inflation; real estate could therefore decrease the variance of portfolio returns. The finding that real estate is generally a good inflation hedge is supported by numerous other studies as well.

Chua (1999) found, using mean-variance analysis, that including international real estate in a mixed-asset, internationally-diversified portfolio could improve its risk-return characteristics. McCue and Kling (1994) found that the macro economy explains about 60 percent of real estate returns. Inflation, or possibly real interest rates since the study could not distinguish between these two influences, was the major influencing factor.

Some studies have also found that there are systematic relationships between portfolio return and the types of real estate contained in a portfolio. Gyourko and Nelling (1996) found that beta was significantly higher for retail REITs than for industrial and warehouse REITs. Mueller and Laposa (1995) found that property type allocations in a portfolio can enhance investor returns over real estate market and economic cycles. However, as Mueller and Lapsoa point out, there can be a problem with institutional investors such as pension funds taking full advantage of this because investment advisors frequently specialize in certain types of properties and can give conflicting advice and recommendations.

D. Summary

This chapter briefly reviewed the main models that have been developed in MPT and some of the relevant empirical evidence. Different theoretical approaches to portfolio management will focus on different features of any investment. If the focus is on the characteristics of individual securities, investors will be primarily interested in the expected mean and variance of a security's returns and in the indicators used in fundamental analysis to predict these, such as capital structure, quality of management, industry, and dividend policy. An adherent of mean-variance analysis in a portfolio setting would construct portfolios by putting assets together that had low or negative correlations with each other. An investor subscribing to the CAPM would focus on an asset's estimated beta value, or its systematic risk in comparison to the broad-based stock market. Such an investor would put together portfolios of assets with different beta values to achieve the portfolio risk-return characteristics that were consistent with the investor's particular risk aversion characteristics and return requirements. An investor following the APT model framework would take into account multiple betas for the asset that reflected the more diverse risk factors that were of concern to him. In addition to market risk, this might include the risk of inflation, investor confidence, and other factors. Investors following the international extensions of these latter two models (the ICAPM and IAPT models) would also factor in the exchange rate risk characteristics of particular assets.

The chapter also reviewed recent empirical evidence that has a direct bearing on the role for rental housing investments in portfolios under different theoretical approaches to portfolio management. Some earlier empirical evidence suggested that real estate returns for both the U.S. and Canada have historically compared favourably on a risk-adjusted basis with those of stocks and bonds. This evidence also suggested that the low correlation between real estate returns and those of other asset classes meant that there are gains through diversification if real estate holdings are included in a portfolio. More recent and more broadly based empirical evidence calls into question the first assertion but does lend some support to the second.

Real estate returns over a substantial period of time for a variety of countries including Canada and the U.S., have generally underperformed both broad-based measures of stock returns and long-term bonds. Statistical evidence presented also indicates that unhedged real estate returns are generally more volatile than returns to equities and that even hedged real estate returns are more volatile in the case of Canada. Thus, real estate returns in Canada appear to be both lower

than those of equities and substantially more volatile. Evidence presented for the U.S. indicates that the low rates of return for real estate also apply to rental housing investments specifically, although there is no research currently available to confirm whether or not this is also true for Canada..

There is also a great deal of evidence on the risk profile of real estate investments in a portfolio setting. Estimates show that market-beta values for real estate are very low (far less than 1), indicating that including real estate assets in a conventional stock portfolio can moderate its risk profile. While betas for equity REITs are typically somewhat higher than for direct real estate investments, even these are usually significantly less than 1. There is also a large literature confirming the inflation-hedging attributes of real estate. Some studies provide evidence that beta profiles can vary somewhat across different types of real estate, which supports the contention that property-type diversification in portfolios can be used to manipulate portfolio beta risk as well as to eliminate the real estate alpha risk.

Data indicate that currency risk adds to the riskiness of both hedged and unhedged investment in Canadian real estate by foreigners. In the case of U.S. investors, for example, currency risk accounts for about 20 percent of total risk for hedged real estate investments. In the case of investors from other countries, currency risk is in some cases significantly greater than this. This lends direct credence to the international variants to the portfolio models, such as the ICAPM and the IAPT.

The proliferation of derivative financial instruments can have a significant bearing on the demand for a particular asset like rental housing investments. Derivatives permit an investor to construct designer portfolios of virtually unending risk-return characteristics. Synthetic portfolios can be developed that may circumvent the need to include particular assets that might otherwise be demanded because of their risk profiles.

Obviously, then, the theoretical approach to portfolio management that a particular pension manager follows could have a substantial affect on the perceived desirability or need to make rental housing investments, or any other types of investments for that matter. The results can be dramatic. For example, De Wit (1996) finds that pension funds and insurance companies in the Netherlands typically allocate about 15 percent of their portfolios to real estate equity, roughly four times the historical level for Canadian and U.S. funds. This is because of different approaches to portfolio management in the Netherlands. For example, Dutch institutional managers focus less on the risk-return characteristics of real estate and much more on its inflation-hedging features than do U.S. institutional managers.

The importance portfolio managers' understanding and use of portfolio theory in constructing pension fund portfolios is also highlighted by the survey findings of Louargand (1992). While he found that pension managers were very cautious in adopting advances in MPT into their day-to-day portfolio management practices, they in some cases continued to follow practices that had been discredited in the academic literature for many years.

Of course, none of the insights into the portfolio advantages of rental housing or other types of real estate investments are likely to have much bearing on their relative attractiveness among pension and other fund managers if the root causes of the low returns to these types of investments are not discovered and remedied. A unique risk profile for a specific asset can help in carving out a portfolio niche for the asset but it cannot overcome the disadvantages created by low returns.

It should be emphasized that the vast bulk of the existing empirical evidence relates to real estate in aggregate and not specifically to rental housing, and much of the existing evidence relates to the U.S.. The author is not aware of detailed analysis relating specifically to rental housing for either the U.S. or Canada. As noted, calculations by the author substantiate the conclusion of low rates of return to U.S. rental housing investments in recent years. Having said this, caution is warranted in extrapolating the evidence to Canadian rental housing. The lack of separate evidence for rental housing might compound difficulties in generating interest among institutional investors such as RPPs/RRSPs. It is quite possible for attitudes towards rental housing to be inappropriately tainted in the eyes of investors if low rates of return do not, in fact, apply to that sub-sector of real estate. On balance, however, existing evidence suggests that low rates of return are likely to be an obstacle to increased rental housing investment. In the author's view, it would be highly desirable for detailed analysis to be undertaken of the rate of return and risk characteristics of Canadian rental housing investments.

CHAPTER VI: SURVEY RESULTS

This chapter presents the results obtained from the survey of pension funds. The information comes from two sources: (1) from a special statistical database that was compiled on the pension funds and money managers to whom the survey was sent; and (2) from the responses to the survey questionnaire that was distributed to pension fund and money managers.

A. Profile of Pension Funds Included in the Survey

This section describes the statistical profile of the pension funds to whom the survey was sent. This information was extracted from a statistical database purchased from *Benefits Canada*[19] for the sample of pension funds contained in the survey. Pension funds were chosen for inclusion in the survey based on the selection criteria described in Appendix B to this report.

The author's intent was to merge the information obtained from the responses to the survey with the data compiled from the *Benefits Canada* datafile. This would have resulted in an integrated, comprehensive database for assessing rental housing investments. Unfortunately, as discussed later in this chapter, the response rate to the survey was low and the information provided was often incomplete so that it was not feasible to formally merge the two sources of information. Thus, the results of the survey are presented separately in section C in this chapter.

While the survey was sent to only eighty pension funds, the master database compiled by *Benefits Canada* personnel included an additional fifteen funds randomly selected from three different size categories (small, medium and large), in case there were problems with any of the eighty funds intended to be included in the survey. In order to make use of as much information as possible, the statistical profile below relates to the full sample of 95 funds, not just the eighty actually sent the survey; however, the inclusion of the fifteen extra funds has no material effect on the statistical results. In this section of the chapter, I refer to the full set of 95 funds as "survey funds", although it should be emphasized that only eighty were actually sent the survey and only a fraction of these funds actually responded.

---

[19]*Benefits Canada* conducts an annual survey of pension funds and money managers. It constructs a master database file, based on the responses to the survey.

The Size Distribution of Funds and Assets

Table VI.1 presents data on the distribution of funds and fund asset holdings by asset size class. The tremendous difference in the size range of the funds is apparent. The largest 3 percent of funds account for 40 percent of total pension assets. Indeed, the largest 30 percent of funds account for over 90 percent of assets. Average assets for the different size classes range from a low of $6.6 million to a high of $59.4 billion. The largest fund in the sample has assets of $67.1 billion while the smallest has assets of $3.1 million. The wide range in asset size was designed to ensure that the statistical profile is fully representative of the entire industry. In total, the funds have $386 billion in assets and an average size of $4.1 billion.

TABLE VI.1
DISTRIBUTION OF SURVEY FUNDS AND THEIR ASSETS BY ASSET CLASS: 1999

Asset Class $ mil.	No. of Funds	% of Funds	Cumu-lative % of Funds	Total Assets $ mil.	% of Assets	Cumu-lative % of Assets	Average Assets $ mil
50,000-68,000	2	2.1	2.1	118,786.0	30.8	30.8	59,393.0
25,000-50,000	1	1.1	3.2	35,490.0	9.2	40.0	35,490.0
10,000-25,000	9	9.5	12.6	112,729.5	29.2	69.2	12,525.5
5,000-10,000	8	8.4	21.1	59,156.4	15.3	84.5	7,394.6
2,000-5,000	9	9.5	30.5	30,580.3	7.9	92.4	3,397.8
1,000-2,000	11	11.6	42.1	16,131.9	4.2	96.6	1,466.5
500-1,000	4	4.2	46.3	3,723.9	1.0	97.6	931.0
250-500	20	21.1	67.4	7,303.0	1.9	99.5	365.2
100-250	8	8.4	75.8	1,600.8	0.4	99.9	200.1
50-100	2	2.1	77.9	152.9	0.0	99.9	76.5
25-50	6	6.3	84.2	188.4	0.1	100.0	31.4
10-25	7	7.4	91.6	118.6	*	100.0	16.9
Under 10	8	8.4	100.0	53.1	*	100.0	6.6
TOTAL	95	100.0		386,014.8	100.0		4,063.3

NOTE: * indicates less than 0.05.

Types of Pension Organizations

Table VI.2 shows information on the survey funds by type of organization. The largest representation (58 percent of funds) is among funds representing corporate entities followed by funds representing the public sector (32 percent). Three university funds and 3 union funds round out the survey population. In terms of control of assets, however, the situation is completely reversed. Public sector funds control 75 percent of the total assets, while corporate funds control only 24 percent. The average asset holdings of the public funds is $9.6 billion while that of the corporate funds is $1.6 billion.

TABLE VI.2
DISTRIBUTION OF SURVEY FUNDS AND THEIR ASSETS BY TYPE OF ORGANIZATION: 1999

	No. of Funds	% of Funds	Total Assets $mil.	% of Assets	Average Assets $ mil.
Corporate	55	57.9	90,583.7	23.5	1,647.0
Public	30	31.6	289,162.8	74.9	9,638.8
Non-profit	4	4.2	912.0	0.2	228.0
University	3	3.2	1,958.8	0.5	652.9
Union	3	3.2	3,397.5	0.9	1,132.5
TOTAL	95	100.0	386,014.8	100.0	4,063.3

The Provincial Distribution of Funds and Assets

Table VI.3 shows the distribution of funds and fund assets by province of registration. Not surprisingly, Ontario alone accounts for 43 percent of funds, followed by Quebec with 18 percent and Alberta with 12 percent. Ontario also has the largest percentage of pension assets at 49 percent, followed again by Quebec at 31 percent. The average size of assets is largest in Quebec at $7.1 billion, which is 50 percent larger than the average asset size for Ontario funds.

TABLE VI.3
DISTRIBUTION OF SURVEY FUNDS AND THEIR ASSETS BY PROVINCE OF REGISTRATION: 1999

	No. of Funds	% of Funds	Total Assets $ mil.	% of Assets	Average Assets $ mil.
NF	2	2.1	758.8	0.2	379.4
NS	4	4.2	7,371.6	1.9	1,842.9
NB	2	2.1	2,979.2	0.8	1,489.6
QC	17	17.9	120,966.7	31.3	7,115.7
ON	41	43.2	189,386.2	49.1	4,619.2
MAN	6	6.3	5,725.3	1.5	954.2
SASK	3	3.2	52.9	0.0	17.6
ALTA	11	11.6	16,055.4	4.2	1,459.6
BC	6	6.3	39,399.9	10.2	6,566.7
NWT	1	1.1	275.0	0.1	275.0
US	2	2.1	3,043.8	0.8	1,521.9
TOTAL	95	100.0	386,014.8	100.0	4,063.3

Categories of Plans

Table VI.4 shows that 69 percent of the pension plans in the database of survey funds are defined benefit plans and that these plans account for 97 percent of the assets in the database. Defined benefit plans are plans that are committed to paying the pensioner a pre-specified pension amount per period upon retirement. While 19 percent of the plans are defined contribution plans, these plans account for only a minuscule amount of the asset total–only one-fifth of one percent. Under the terms of defined contribution plans, the pensioner not entitled to a pre-specified pension amount. Rather, he receives amount consistent with the contributions actually made and the investment earnings that accumulate on contributions. Almost 8 percent of the plans are group RRSPs but these account for a negligible share of the asset total. One would expect that defined benefit plans would have to be more prudent in their investment decisions than defined contribution or group RRSP plans, because of the more rigid payout commitments of the latter.

TABLE VI.4
DISTRIBUTION OF SURVEY FUNDS AND THEIR ASSETS BY TYPE OF PENSION PLAN: 1999

	Type of Plan				
	Defined Benefit	Defined Contri-bution	RRSP	Other	TOTAL
% of funds	69	19	8	5	100
% assets	97	*	*	2	100

NOTE: * indicates less than 0.5.

Aggregate Investment Portfolio of Plans

Table VI.5 shows the aggregate investment portfolio of the survey funds. Fifty-one percent of assets consist of equities while 24 percent consist of bonds. Thus, there is a considerably higher percentage of equities and a considerably lower percentage of bonds than was reported for the previous year (1998) from the Statistics Canada survey (Table II.5). This most likely is a reflection of the fact that pooled funds are broken out separately in the Statistics Canada data, where they account for almost 25 percent of assets in 1998, but are not identified in terms of their holdings–e.g., bonds or equities. Mortgages comprise 1.5 percent of the assets of the survey funds, which is exactly the same as the total in the Statistics Canada data (if mortgage funds are included). Real estate is 4.3 percent of assets in the database for the survey funds while it is 3 percent in the Statistics Canada data for 1998 when real estate funds are taken into account. While this may reflect an increase in the popularity of real estate, it may also simply reflect a somewhat higher percentage of larger funds in the survey sample than in the Statistics Canada sample, since real estate is more popular amongst larger funds. On balance, there is no reason to suspect that the database for the survey funds is unrepresentative of the total population of all funds, a fact that is not particularly surprising since the survey funds account for roughly three-quarters of all pension assets.

TABLE VI.5
AGGREGATE INVESTMENT PORTFOLIO OF SURVEY FUNDS: 1999

	Assets	
	$ mil.	**Percent**
Total equities	197,169.9	51.1
- Canadian equities	109,890.0	28.5
- U.S. equities	36,111.1	9.4
- Other international equities	51,168.8	13.3
Total bonds	91,327.0	23.7
- Canadian bonds	86,832.2	22.5
- International bonds	4,494.8	1.2
Real estate	16,461.0	4.3
Mortgages	5,875.2	1.5
Money market	10,035.9	2.6
Venture capital	997.9	0.3
Other	64,147.9	16.6
TOTAL	386,014.8	100.0

Real Estate Holdings

Table VI.6 below provides information on real estate holdings of pension funds distributed by asset class.[20] Thirty-four funds, about 36 percent of the total, report real estate holdings. Real estate equity investments are held exclusively by larger funds with total assets greater than $100 million. The percentage of funds reporting real estate holdings increases fairly continuously with increasing asset size. It is notable that almost 70 percent of the funds with assets greater than $500 million have real estate investments, as do all of the three largest funds. The second last column shows that the percentage of assets invested in real estate generally also increases steadily with asset size of fund for funds with assets above $2 billion. However, with the exception of the single fund in the second largest asset category, for which real estate constitutes a very large 13 percent, real investments are always under 5 percent of total asset amounts. The last column dramatically indicates the concentration of the dollar amount of real estate investments in larger funds–the largest three funds account for 57 percent of real estate investments while the largest 12 funds (of which 9 hold real estate) account for 83 percent.

---

[20]Real estate holdings include only equity holdings, not debt. Staff at *Benefits Canada* involved in the survey believe that the vast majority of REIT holdings would be reported in the real estate equity category. The investment categories are very detailed and the survey respondents are given many narrowly defined options from which to choose, although REIT holdings do not constitute a separate category. There is a residual "other" category, although even it is tightly defined, and some REIT holdings could inadvertently be reported in that category. Shareholdings in a taxable real estate corporation would almost certainly be included in the general "equity" category.

TABLE VI.6
DISTRIBUTION OF PENSION REAL ESTATE HOLDINGS BY ASSET CLASS: 1999

Asset Class $ mil.	Total No. of Funds	Funds with Real Estate Investments				
		No. of Funds	% of Funds	Value of Real Estate Assets $ mil.	Real estate as % of Total Assets	% of Total Real Estate Assets
50,000-68,000	2	2	100.0	4,665.0	3.9	28.3
25,000-50,000	1	1	100.0	4,707.3	13.3	28.6
10,000-25,000	9	6	66.7	4,315.0	3.8	26.2
5,000-10,000	8	6	75.0	1,625.8	2.7	9.9
2,000-5,000	9	5	55.6	459.0	1.5	2.8
1,000-2,000	11	6	54.6	487.1	3.0	3.0
500-1,000	4	4	100.0	182.7	4.9	1.1
250-500	20	2	10.0	14.6	0.2	0.1
100-250	8	2	25.0	4.6	0.3	*
50-100	2	0	0.0	0.0	0.0	0.0
25-50	6	0	0.0	0.0	0.0	0.0
10-25	7	0	0.0	0.0	0.0	0.0
Under 10	8	0	0.0	0.0	0.0	0.0
Total	95	34	35.8	16,461.0	4.3	100.0

NOTE: * indicates less than 0.5.

Plan Asset Management

Table VI.7 shows the proportions of real estate investments that are managed internally within the fund and externally by outside investment managers, distributed by pension asset class size. Overall, the bulk of real estate investments (70 percent) are managed internally, while only 30 percent are managed externally. There is really no discernible trend across asset size classes although, of course, very small funds do not report real estate holdings.

The survey covers both pension funds and external money managers. However, it is clear, based on the percentage of real estate managed internally, that it is the attitudes and investment approaches of the internal pension managers that is of primary importance. At least this is generally the case for larger funds, which are the only funds that currently make real estate investments. Of course, it might be more meaningful to consider the total percentage of all assets (not just real estate) that are managed internally since it is the decision to invest in real estate that is of interest, not how particular classes of assets are managed after such broad asset allocation decisions are made. Even if this is true, however, the conclusion is essentially unchanged since unreported data from the database show that two-thirds of all pension assets are managed internally. For smaller funds that do not currently make real estate investments, the attitudes of external managers may be more important since the database also indicates that many of them rely totally on external management expertise. The influence of external managers in such cases might well extend beyond decisions about which particular investments to make to the very design of the investment plan and the broad categories of investments that the plan will consider as potential candidates for investment.

TABLE VI.7
PROPORTIONS OF PENSION FUND REAL ESTATE INVESTMENTS MANAGED EXTERNALLY AND INTERNALLY BY ASSET CLASS: 1999

Asset Class $ mil.	Value of Real Estate Investments $ mil.	% of Real Estate Investments Managed Externally	% of Real Estate Investments Managed Internally
50,000-68,000	4,665.0	41.4	58.6
25,000-50,000	4,707.3	0.0	100.0
10,000-25,000	4,315.0	48.0	52.0
5,000-10,000	1,625.8	31.3	68.7
2,000-5,000	459.0	2.6	97.4
1,000-2,000	487.1	59.3	40.7
500-1,000	182.7	24.5	75.5
250-500	14.6	100.0	0.0
100-250	4.6	54.2	45.8
50-100	0.0	n.a.	n.a.
25-50	0.0	n.a.	n.a.
10-25	0.0	n.a.	n.a.
Under 10	0.0	n.a.	n.a.
Total	16,461.0	29.6	70.4

The Use of Derivatives

Chapter V discussed how the use of derivatives by portfolio managers is proliferating. Derivatives are being used to achieve a variety of objectives, including the construction of designer portfolios with risk-return characteristics that meet the portfolio managers' requirements. The data in Table VI.8, which show the prevalence of the use of derivatives and index funds by the survey funds, indicate the extent to which pension fund managers have adopted this trend. About 30 percent of the funds use derivatives, with approximately one fund in seven using derivatives for each of the four specific purposes identified. However, derivatives, are very popular among larger funds; 74 percent of the 35 funds with total assets greater than $1 billion use them. Forty percent of these large funds use them to achieve asset allocation mix objectives or to hedge currency risk. Just over 30 percent of large funds use derivatives for foreign exposure or as index funds. The use of derivatives can significantly affect the demand for a specific asset like rental housing since the derivative instruments can be used in combination with a selected portfolio of assets to achieve virtually any achievable combination of portfolio risk and return. Thus, it might be possible for investment managers to use derivatives to achieve the risk-diversification advantages associated with a specific asset like rental housing with fewer hassles.

TABLE VI.8
USE OF DERIVATIVES AND INDEX FUNDS BY SURVEY FUNDS: 1999

	Percentage of Funds Using Derivatives				
	for any Purpose	**for Foreign Exposure**	**for Asset Mix Allocation**	**to Hedge Currency risk**	**for Index Funds**
% of all funds	29.5	12.6	14.7	15.8	13.7
% of large funds (total assets > $ 1 bil.)	74.3	31.4	40.0	40.0	31.4

Real Estate Holdings of Money Managers

Table VI.10 shows detail on the real estate holdings of the money management firms that were sent the survey. Only 13 of the 80 firms report any form of real estate investments. There is no tendency for these holdings to be clustered in the larger firms. Ten of the firms report equity real estate investments; the total amount of equity investments is $5.7 billion, less than 1 percent of the total assets of the funds. Seven of the firms hold mortgages, which account for an additional $2.3 billion in assets. Only 1 firm holds REIT shares, amounting to just $87 million in assets. As discussed earlier, however, it is quite likely that some of the equity investments reported are actually in the form of REITs. Overall, this data indicates that real estate investments rate very low in popularity among money management firms.

TABLE VI.10
DISTRIBUTION OF REAL ESTATE INVESTMENTS OF SURVEY MONEY MANAGERS BY ASSET CLASS: 1999

			Type of Real Estate Investment					
Asset Class $ mil.	No. of Firms	No. with Real Estate Assets	Equity No.	Equity $ mil.	Mort-gage No.	Mort-gage $ mil.	REIT No.	REIT $ mil.
40000 to 50000	3	1	1	4,065.0	1	1,523.0	0	0
20000 to 40000	3	1	0	0.0	1	15.9	0	0
15000 to 20000	8	1	1	55.9	1	140.1	0	0
10000 to 15000	7	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5000 to 10000	9	4	2	396.2	2	472.2	1	87
2000 to 5000	10	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1000 to 2000	18	2	2	762.9	1	75.4	0	0
500 to 1000	10	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
100 to 500	8	4	4	385.5	1	28.3	0	0
10 to 100	4	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TOTAL	80	13	10	5,665.5	7	2,254.9	1	87

C. Survey Responses

This section of the report is based on the survey, which was sent to eighty pension funds and eighty money management firms. Where appropriate, survey data is supplemented by data from the special file compiled from *Benefits Canada* data, which was used to profile pension funds and management firms in the preceding two sections of this chapter.

The Survey Response Rate

Table V.10 below shows comparative data on the funds that responded to the survey and all funds in the datafile. In total, 23 percent of the pension funds (18 funds) and 15 percent of the money managers (12 organizations) responded to the survey. The responding pension funds accounted for 33 percent of total pension fund assets, while the money managers accounted for 9 percent. The coverage with respect to real estate holdings is quite good for both groups; the pension funds include 22 percent of all funds with real estate equity holdings, while the money managers account for 25 percent of those with real estate. The pension funds and money managers responding to the survey account for 48 percent and 11 percent, respectively, of equity real estate holdings in their categories. The last three columns show that the responding organizations are very representative in terms of size, with the minimum, maximum and median fund sizes very close to those for the full database. Unreported data also show that funds responding to the survey are distributed fairly evenly between the minimum and maximum values.

TABLE VI.10
COMPARISON OF FUNDS RESPONDING TO THE SURVEY AND ALL FUNDS IN THE DATABASE

	No. of Funds	% of Total Funds	% of Total Assets	% with Real Estate Equity	% of Real Estate Equity Value	Smallest Fund	Largest Fund	Median Fund
Sample RPP Funds	18	23	33	22	48	$8.8 mil.	over $40 bil.*	$354 mil.
Total RPP Funds	80	100	100	36	100	$3.1 mil.	$67 bil.	$434 mil.
Sample Money Managers	12	15	9	25	11	$10.1 mil.	over $20 bil.*	$1.5 bil.
Total Money Managers	80	100	100	13	100	$10.1 mil.	$60 bil.	$2.4 bil.

NOTE: *The maximum fund size is only approximated to preserve confidentiality.

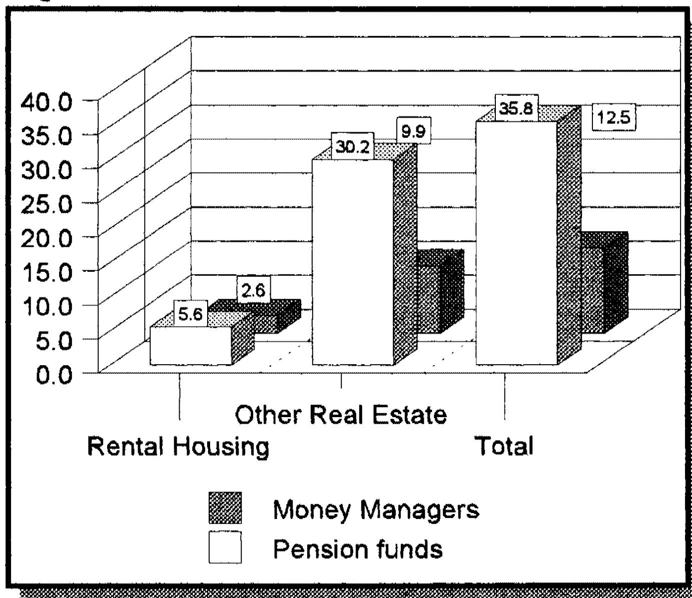
Other data not reported in the table also support the representativeness of the responding pension funds in other respects. In terms of type of fund, the break-down is as follows: corporate (11 funds); public sector (5 funds); union (1 fund); non-profit (1 fund). The provincial distribution of the funds is also quite broad, with the break-down as follows: Nova Scotia (1 fund); New Brunswick (1 fund); Ontario (10 funds); Manitoba (2 funds); Saskatchewan (2 funds); and Alberta (2 funds).

In the majority of cases, the response to the survey was only partial In some cases, data from the survey for a particular organization is supplemented with data from the database acquired from *Benefits Canada*. In other cases where crucial information gaps remained, follow-up calls were made to the respondents.

Rental Housing Investments

Figure VI.1 shows percentages of pension funds and money managers reporting equity investments in rental housing and other types of real estate. In total, only 6 percent of pension funds and 3 percent of money managers report rental housing investments, although overall equity real estate holdings are reported by 36 percent of pension funds and 13 percent of managers.[21]

FIGURE VI.1: PERCENTAGE WITH RENTAL HOUSING AND OTHER REAL ESTATE EQUITY INVESTMENTS



[21]The figures for the total funds reporting real estate is taken from the database of all funds, while the figure for the "other real estate" category is derived as the difference between that figure and the rental housing figure. A similar calculation is made in deriving Figure VI.2.

Figure VI.2 shows the breakdown in real estate equity holdings for pension funds and money managers. In total, rental housing comprises only a minuscule portion (.1 percent) of the overall asset holdings of pension funds and an even smaller proportion (.05 percent) of the asset holdings of money managers. Other real estate (i.e., commercial properties) comprises almost all real estate equity holdings, accounting for 4.2 percent of pension fund and .85 percent of money management firms' assets.

FIGURE VI.2: CATEGORIES OF REAL ESTATE INVESTMENTS AS PERCENTAGE OF TOTAL ASSETS

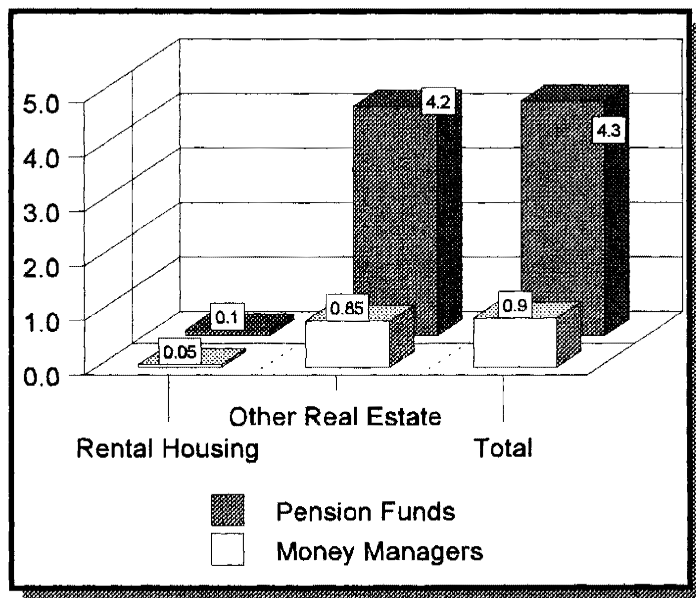
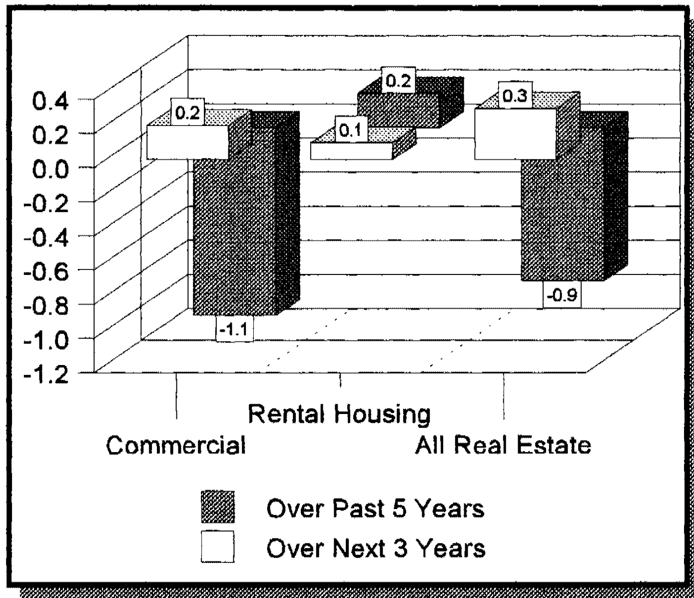


Figure VI.3 shows the percentage point change in the share of real estate holdings in pension fund assets over the recent past and near future. In total over the past five years, real estate as a percentage of total pension fund assets has declined by about 0.9 percentage points, from 5.2 percent in 1994 to 4.3 percent in 1999. This breaks down very roughly into a 1.1 percentage point drop for commercial properties and a .2 percentage point gain for rental housing properties.[22] Estimates for the next three years are very tentative and based largely on qualitative responses of survey respondents. In total over the next three years, it might be reasonable to expect an increase in the real estate share of total asset holdings of perhaps .3 percentage points, with commercial and rental housing properties accounting for perhaps two-thirds and one-third of this gain, respectively. This is not evidence of a marked trend towards increased real estate holdings but rather a regaining of ground lost over the past few years.

FIGURE VI.3: PERCENTAGE POINT CHANGE IN SHARE OF REAL ESTATE IN PENSION FUND ASSETS

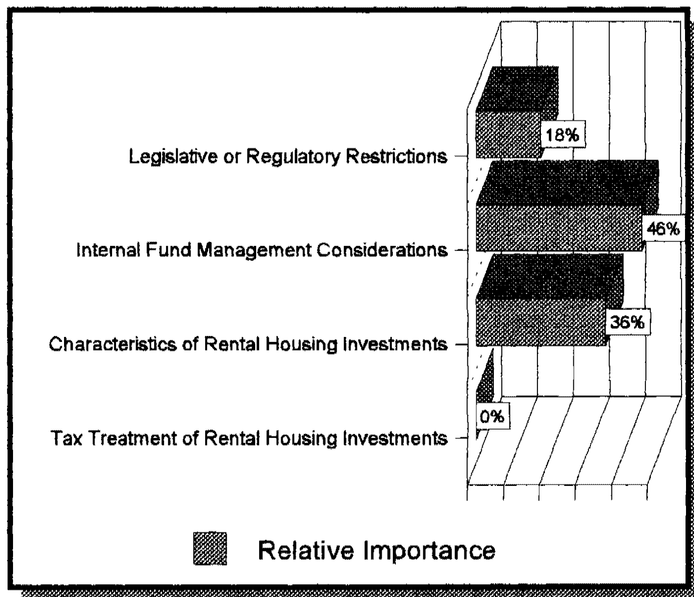


[22]This is based on a combination of data from the *Benefits Canada* database, Statistics Canada data, and data from the survey. The growth in real estate holdings is derived from the first two sources and the apportionment between categories of real estate is based on the responses to the survey.

Obstacles to Increased Rental Housing Investments

There appear to be many obstacles to increased rental housing investments. Figure VI.4 shows the percentage distribution of factors identified by respondents to the survey. An obstacle was included in constructing the figure if it was either identified as a "top three" impediment to investment, or if in section B.1 of the survey it was identified as an impediment with a ranking of 5 or above. There were in total fifty such identified impediments.

FIGURE VI.4: RELATIVE IMPORTANCE OF VARIOUS OBSTACLES TO RENTAL HOUSING INVESTMENT



The largest impediment category was "Internal Fund Management Considerations" (46 percent). Major items identified within this category include:

(i) "general management attitudes;"
(ii) "lack of relevant investment expertise;"
(iii) "fund investment objectives and guidelines;" and
(iv) "prudent person investment considerations."

The second largest category of impediment was "Characteristics of Rental Housing Investments" (36 percent). The major factors in this category included:

(i) "illiquidity of rental housing investments;"

(ii) "high management overhead;" and
(iii) "unavailability of suitable investment instruments."

Various other factors were also identified in this category, including:

- "high transaction costs for acquisitions/dispositions;"
- "inability to value investment holdings precisely;"
- "insufficient suitable investment opportunities;"
- "competition from government subsidized housing;"
- "high maintenance;"
- "low return;"
- "lack of interest;" and
- "no market."

The third largest category of impediment was "Legislative and Regulatory Restrictions" (18 percent). Two leading items here were:

(i) "rent controls" and
(ii) "other landlord-tenant legislation or regulations."

Other factors mentioned in this category include:

- "federal PBSA (*Pension Benefits Standards Act*) or equivalent provincial legislation;"
- "federal or provincial RPP/RRSP regulations;"
- "other income tax rules on eligible investments;" and
- "zoning regulations and rules."

Not one mention was made to the category "Tax Treatment of Rental Housing Investments" as an impediment to investment. This may not mean, however, that income, property, capital gains, sales and GST/HST taxes are not potentially important but rather that investment manager's thinking has not even progressed to this point because of the plethora of other perceived obstacles and negative optics around rental housing investment.

Many of the general comments made by the survey respondents also shed light on their attitudes toward rental housing investments. Figure VI.5 below contains a representative selection of comments, from funds of various asset sizes. Generally speaking, the comments indicate that in the typical case, rental housing investments are outside the sphere of investment choices made or considered by funds. Moreover, many managers express negative sentiments about rental housing investments.

FIGURE VI.5
SELECTED COMMENTS OF RESPONDENTS TO PENSION FUND AND MONEY MANAGER SURVEY

PENSION FUNDS

Public fund: assets $30 billion-$40 billion

We hold a significant component of our funds in real estate; rental housing is a recent component and accounts for only .02% of assets. We do not anticipate increasing rental housing in the foreseeable future. We may hold real estate directly or indirectly through shares or REIT units. We do not use an intermediary vehicle (corporate, trust, partnership) for direct holdings–we view liability risk as minimal. Because of our size, we do not have a liquidity problem with real estate, especially residential, which is relatively liquid in comparison to commercial properties. We base our choice of city/province for real estate investments on regional growth prospects.

Corporate fund: assets $.75 billion to 1.5 billion

We are subject to prudent man investor regulations. It is hard to justify investing in rental housing, or most other "social" investments given their lack of liquidity and the return prospects. I feel that it is imprudent for funds to be invested in this sort of vehicle that is illiquid, requires specialized and intensive management, and small scale. We have no real estate investments for these reasons. Need to be careful to recognize fiduciary obligation to either the plan sponsor or plan participant (whoever is taking the investment risk). RPPs and RRSPs are people's savings for retirement, not "cookie jars" of money that can be tapped for various "good works". Investment of these savings involves putting someone at risk. The manager must weigh risk and reward in this context. Political pressure to direct investment is wrong and conflicts with fiduciary obligations.

Corporate fund: assets $1 billion to 1.5 billion

Rental real estate could only be justified by extremely large funds that can diversify the risk and justify the overhead involved. For anyone else any incremental return would be eaten up by overhead and manager fees. Distinguish between direct investments in rental housing and securities that may be related to or financing rental housing. The former has no appeal; the latter does but must demonstrate risk/reward advantages before purchase.

FIGURE VI.5 Cont'd

Public fund: assets $2 billion to $3 billion
We hold about $100 million in real estate, all commercial. We are added value investors and acquire commercial properties to improve them. Little opportunity in the case of rental housing properties, which are an income thing. In my opinion very few funds are invested in rental housing. Rent controls are a problem, though not so much in Ontario any more. Major problems in acquiring rental housing properties of sufficient size. Major turnover problems with existing residential properties–many held by old money that don't want to incur tax consequences of sales. Also, funds (especially public funds) don't want tenant hassles such as evictions. Can't see funds going from zero real estate directly to residential. Would probably go to commercial first. Much more product of sufficient size. More advisors and property managers available. We use the sec. 149 Income Tax Act vehicle (REIC) for real estate and have no problems with it..
Corporate fund: assets $400 million to $500 million
Although the investment policy allows for investment in real estate equities and debt (mortgage loans), we currently do not have any funds invested in this sector. Our current portfolio target weights are 30% Canadian Equities, 30% Global Equities (Non CDN), and 40% Canadian Bonds. Our actual weights are close to these targets. We have not invested any time in examining the merits of investing directly in real estate. No real research done on real estate due to Corporate lack of interest in this investment class.
Public fund: assets over $10 billion
Would not treat rental housing as an asset class therefore it is not relevant [to portfolio selection process].
Corporate fund: assets $.75 billion to $1.5 billion
We generally invest only in public deals. We use a bottom up approach and are value investors. We buy and hold usually . When we invest in real estate, it is usually the public vehicle (whether at corporate level or unsecured debt). We do hold REIT's but not in rental real estate. I do not see us getting involved in rental housing. It is hard to describe the impediments when we haven't ever gone down that road. After talking to other managers (equity) they have very little investment knowledge on rental housing.
Corporate fund: assets: $2 billion to $3 billion
We make the asset allocation decision and employ specialised [outside] investment managers to make the security selection. Real estate is not included in our asset allocation. Too intensive management. Liability issues re REITS.

Corporate fund: assets $150 million to $250 million
Currently our plans have no investments in rental housing, nor do we contemplate having any in the near future.
Corporate fund: assets $3oo million to $400 million
We have six external specialist investment management firms to invest the funds. Two of the managers handle Canadian equity investments, two others invest in Canadian fixed income securities, one manager is for U.S. equities, and the other invests in non North American equities. Our pension fund investment committee decides the overall asset mix for the fund and we do feel that it would be beneficial to have additional asset classes at this time for a fund of our size. It is possible that our external investment managers may decide to hold indirect investments in rental housing via securities within their assigned asset classes,
Public fund: $10 million to $20 million
Our pension assets are managed externally. We give them a guideline as to the percentage in which they may invest. We use only investments managed by Canadian Life Insurance Companies. We don't invest in mortgages because we lost money in the past.
MONEY MANAGERS
Assets $3 billion to $6 billion
Asset mix would be set by looking at portfolio optimization models, which try to pick optimal asset classes and weights keeping our low risk objectives in mind. As to rental housing investment...we do not need to make investment in this category in order to meet our fund objectives. Due diligence needed to properly access these deals go beyond the time we would be willing to set aside for it. Therefore, why bother with the headache for only marginal reward.
Assets $20 billion to $30 billion
As we are primarily a specialist equity manager, with a small fixed income component, we do not participate in any real estate investments. We have no plans to change this strategy.
Assets $5 billion to $10 billion
Our investment strategies focus exclusively on the use of derivatives in synthetic indexing for precise market returns and funds of market-neutral hedge funds to produce alpha or value added.

FIGURE VI.5 Cont'd

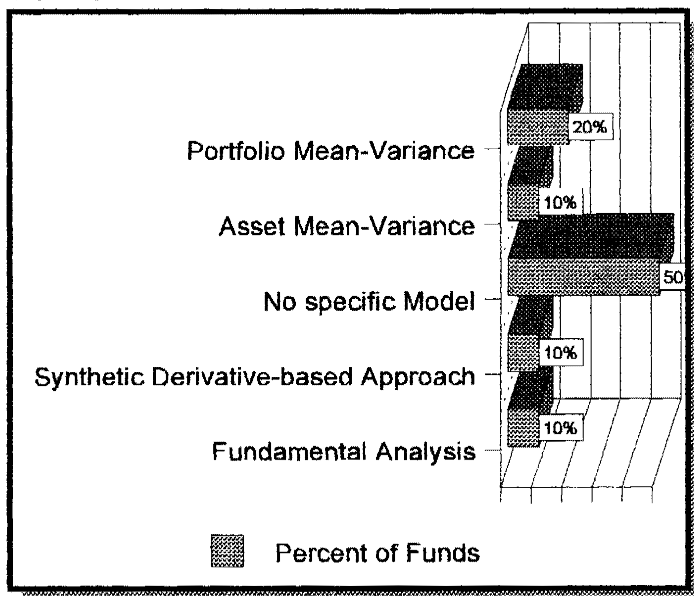
Assets $5 billion to $10 billion
We use real estate as a small component of our discretionary pension accounts through the medium of a pooled real estate fund. The decision as to the type of real estate used, i.e. office, industrial, retail, residential, is based on our outlook for those sectors and we find no significant impediment specific to rental housing that impacts our investment decisions for that market sector.
Assets $2 billion to $3 billion
Our clients consist of public mutual funds, limited partnerships and pension accounts and private assets. We follow a"value investing" approach where we buy securities trading below their estimated intrinsic value. Our approach is asset-oriented and does not rely on market timing. Nor do we weight the portfolio by industry sector or country.
Assets $150 million to $200 million
We are involved only in commercial properties, primarily industrial, and have no interest in rental properties.
Assets $500 million to $1 billion
We manage international investments, and have NO real estate investments at all.
Assets $500 million to $1 billion
We specialize strictly in international equity investments.
Assets $10 million to $15 million
We represent four investment management firms and none invest directly in real estate for their pension fund clients.
Assets $1 billion to $2 billion
We do not invest in real estate or offer real estate funds for investment.

The Funds' Theoretical Approaches to Portfolio Management

As discussed in Chapter V, in principle, the theoretical approach to portfolio management or the portfolio model employed could affect the attractiveness of an asset such as rental housing. This is because different frameworks focus on different risk-return features of assets and the way in which these characteristics interact with those of other assets in a portfolio setting. The major models in the modern theoretical finance literature include, asset-specific and portfolio mean-variance models, the CAPM, asset pricing theory, and the international variants of the latter two models. Only ten funds, although from a wide span of asset sizes, formally answered the question in the survey about the portfolio management approach or model they used (question A.12). Nevertheless the answers are revealing, assuming they are representative of the full population of funds, and are presented in Figure VI.6 below. Fifty percent of funds do not use a specific formal model. Two of the respondents (20 percent of the funds) are classified as using a portfolio mean-variance approach, although in one case the answer is vague and the model might reasonably be interpreted as a CAPM or even an APT model that makes use of asset beta values. Ten percent, respectively, of funds use:

- an asset-specific mean-variance approach;
- a synthetic derivative based approach; or
- fundamental analysis applying to each asset.

FIGURE VI.6: PERCENTAGE OF FUNDS USING A PORTFOLIO MODEL



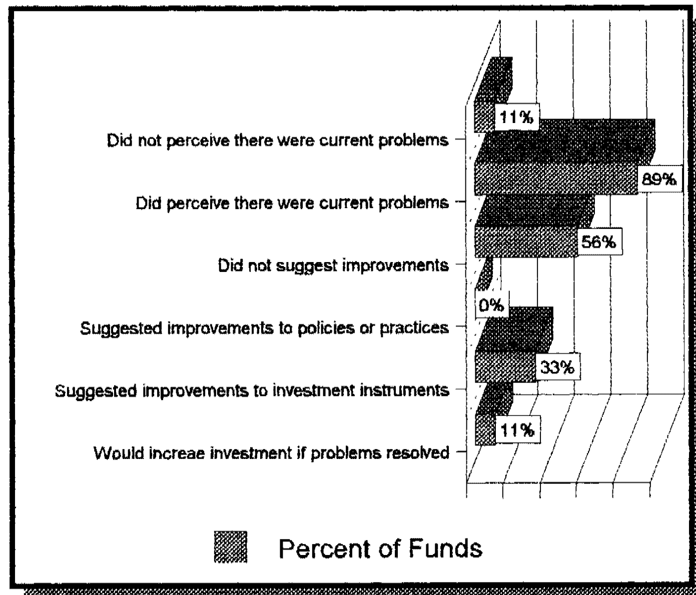
These responses are significant since they indicate that 90 percent (and perhaps 100 percent) of fund managers would not, in a formal sense, make use of information relating to the specific risk profiles of individual assets–particularly an asset such as rental housing that is generally not even given consideration as a potential investment. Managers appear to rely primarily on judgement and broad-based diversification across numerous assets to neutralize volatility in portfolio returns. That is, the focus seems to be on neutralizing individual assets' "alpha risk" through adequate diversification across assets. Adequate alpha diversification simply requires portfolio diversification and does not require the inclusion of assets with specific risk profiles.

There is little indication that managers make much use of the insights of modern portfolio theory to systematically choose assets on the basis of their "beta risk" or systematic risk characteristics against such aggregate measures as volatility in the overall market, interest rates, inflation rates, exchange rates, aggregate economic activity or investor confidence. Increased real estate holdings in portfolios are frequently promoted by analysts and academics on the basis of their beta profile characteristics (particularly their inflation-hedging attributes and their low correlations with the stock market). If investment managers do not accord much weight to the beta profiles of assets in constructing portfolios, this would be another strike against the inclusion of rental housing properties.

Factors that Could Potentially Improve Investment

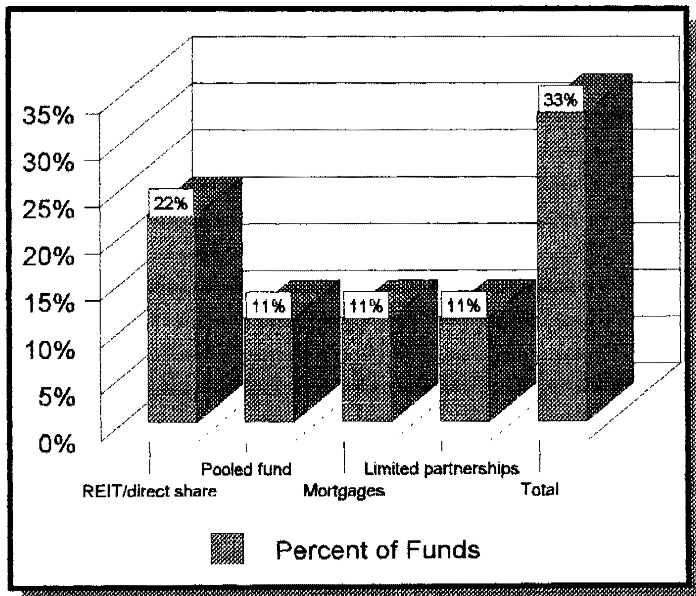
By-and-large, while fund managers are indifferent to or negatively predisposed toward rental housing investments, they did not have strong opinions about what factors could improve the investment climate. This may simply reflect that their thinking has not progressed to this stage or that they are not familiar enough with policy issues to feel comfortable making precise suggestions. Figures VI.7 and VI.8 below summarize the views expressed. Figure VI.7 shows that 11 percent of funds saw no perceived problems with making rental housing investments. The remaining 89 percent of funds saw problems, in most cases major. Fifty-six percent of funds made no specific suggestions for improvements in policies, investment instruments or internal fund practices that could improve the likelihood that they would increase investments in rental housing. In virtually all of these cases, however, the investment managers identified the specific perceived problem areas and these have been discussed above. Thirty-three percent of funds perceived problems with rental housing investments and made suggestions for improvements to investment instruments.

FIGURE VI.7: PERCENTAGE OF FUNDS SUGGESTING CHANGES IN POLICIES, PRACTICES OR INVESTMENT INSTRUMENTS



The suggested improvements are detailed in Figure VI.8 and are related to improved liability protection in the case of REIT investments, and specifically to make them more like share investments, and improvement to the *Income Tax Act* rules for pooled fund investment vehicles, and available mortgage and limited partnership instruments. Only 11 percent of funds indicated, however, that they would actually increase investment over the next three years if the changes they suggested were implemented (Figure VI.7). Moreover, the responses to the survey indicate that the increase in investment would be minuscule and would represent only about 0.1 percent of total pension assets.

FIGURE VI.8: PERCENTAGE OF FUNDS SUGGESTING CHANGES IN SPECIFIC INVESTMENT INSTRUMENTS



D. Summary

This chapter presented a statistical profile and results of a survey for a large group of representative pension funds and money management firms. In total there were 95 pension funds and 80 money managers covered in the statistical profile and 80 of the pension funds and all of the money managers were sent the survey. The organizations in the database accounted for almost $1 trillion in assets at the end of 1999. They range from the very small ($3 million in assets) to the very large ($67 billion in assets). Including both pension funds and money management firms is appropriate because about a third of pension assets (largely those of smaller funds) are managed externally by money managers and because money management firms are responsible for RRSP funds.

The funds included in the database covered a mix of corporate, public sector, union, university and non-profit organizations, with the corporate sector representing the largest share of funds and the public sector the largest share of assets. Assets are highly concentrated in larger funds, with the largest 3 percent of pension funds accounting for 40 percent of pension assets and the top 11 percent of money managers accounting for 60 percent of that category's total assets. In terms of regional representation, Ontario not surprisingly dominates with 43 percent of funds and 49 per of fund assets, followed by Quebec with 18 percent and 31 percent, respectively. Most of the pension plans are defined benefit plans (69 percent of plans and 97 percent of assets), which must meet stiff actuarial standards to meet pay-out commitments.

The survey response rate was fairly low. However, this is the norm for surveys of retirement savings funds, where response rates are typically below 30 percent (see, Brzeski, *et al*, 1993, Louargand, 1992, and Webb, 1984). In total, 23 percent of the pension funds (18 funds) and 15 percent of the money managers (12 organizations) responded to the survey. The responding pension funds accounted for 33 percent of total pension fund assets, while the money managers accounted for 9 percent. The coverage with respect to real estate holdings is quite good for both groups; the pension funds include 22 percent of all funds with real estate equity holdings, while the money managers account for 25 percent of those with real estate. The pension funds and money managers responding to the survey account for 48 percent and 11 percent, respectively, of equity real estate holdings in their categories. The funds responding to the survey were quite representative of the overall database of funds in terms of: size distribution; type of fund (corporate, public sector, etc.); and province of registration.

Information contained in the database of all funds who were sent the survey permits a detailed profile of their portfolio investments. About 36 percent of pension funds report real estate holdings. Real estate accounts for only 4.3 percent of the assets of pension funds, with mortgages accounting for an additional 1.5 percent. Real estate investments are held exclusively by larger funds with total assets greater than $100 million. The percentage of funds reporting real estate holdings increases fairly continuously with increasing asset size. Almost 70 percent of the funds with assets greater than $500 million, about half of funds, have real estate investments, as do all of the three largest funds. The percentage of assets invested in real estate

generally also increases steadily with asset size of fund. However, in all but a single large fund, real estate investments are always under 5 percent of total asset amounts. Real estate holdings are highly concentrated in larger organizations, with the three largest pension funds accounting for 57 percent of real estate investments and the largest 12 funds accounting for 83 percent. Only 16 percent of money management firms report any form of real estate investments and only 13 percent report equity investments, with the latter amounting to just $5.7 billion or less than 1 percent of the total assets of the funds.

Based on information obtained from the respondents to the survey, only 6 percent of pension funds and 3 percent of money managers report rental housing investments. In total, rental housing comprises only a minuscule portion (.1 percent) of the overall asset holdings of pension funds and an even smaller proportion (.05 percent) of the asset holdings of money managers. The vast bulk of real estate holdings of both types of organizations are commercial (non-residential) properties. On the basis of a combination of data from the *Benefits Canada* database, Statistics Canada data and responses to the survey, in total over the past five years, real estate as a percentage of total pension fund assets has declined by about 0.6 percentage points. This breaks down very roughly into a 0.7 percentage point drop for commercial properties and a 0.1 percentage point gain for rental housing properties.

Based on survey responses, over the next three years, it might be reasonable to expect an increase in the real estate share of total asset holdings of perhaps 0.3 percentage points, with commercial and rental housing properties accounting for perhaps two-thirds and one-third of this gain, respectively. This is probably not evidence of a trend towards increased real estate holdings but rather a regaining of ground lost over the past few years.

The survey responses indicate many obstacles to increased rental housing investments. The following are the major categories of impediments:

- "Internal Fund Management Considerations" (46 percent of identified impediments);
- "Characteristics of Rental Housing Investments" (36 percent); and
- "Legislative and Regulatory Restrictions" (18 percent).

Many of the general comments made by the survey respondents indicate that in the typical case, rental housing investments are outside the sphere of investment choices made or considered by funds. Moreover, many managers express negative sentiments about rental housing investments.

The survey results also shed light on the theoretical portfolio decision making process used by fund managers that might have an effect on their decision to include or exclude rental housing investments. The findings indicate that between 90 and 100 percent of fund managers do not, in a formal sense, make use of information relating to the specific risk profiles of assets in making portfolio choices. This is another strike against rental housing properties since their inclusion in

portfolios is frequently recommended by analysts on the basis of their risk profiles (particularly their inflation hedging characteristics and low correlation with the stock market).

The rapidly growing use of derivatives by pension fund managers, as indicated by the profile from the database file, may also be another negative factor against rental housing assets. Derivatives can be used to achieve a variety of portfolio management objectives, including the construction of designer portfolios with risk-return characteristics that meet the portfolio managers' specific requirements. The use of derivatives can significantly affect the demand for a specific asset like rental housing since the inclusion of such an asset may no longer be necessary to minimize a particular type of risk.

While eighty-nine percent of the survey respondents identified problems (in most cases very specific problems) with rental housing investments, only thirty-three percent of funds made specific suggestions for improvements. In all cases, the suggestions were for improvements to investment vehicles, although many of the identified problems were in other areas. The suggested improvements related to improved liability protection in the case of REIT investments (and specifically to make them more like share investments), and improvement to the *Income Tax Act* rules for pooled fund investment vehicles, and available mortgage and limited partnership instruments. Only 11 percent of funds indicated, however, that they would actually increase investment over the next three years if the changes they suggested were implemented. Moreover, the indicated increase in investment would be minuscule at about 0.1 percent of total pension assets.

CHAPTER VII: ASSESSMENT AND CONCLUSIONS

A. RPPs/RRSPs Under-invest in Rental Housing

The purpose of this study was to assess whether Canadian registered pension plans (RPPs) and retirement savings plans (RRSPs) currently under-invest in rental housing relative to the share of that asset in national wealth and, if so, whether there are specific obstacles to investment and policy options that would potentially increase investment. In addressing these questions, the study used an integrated methodology consisting of five principal elements:

- a review of the legislative and regulatory environment;
- a synthesis of the theoretical and empirical literature on modern portfolio theory;
- a survey of pension funds and money managers to collect data and to ascertain their current investment practices, perceptions and attitudes;
- a comparative assessment of the Canadian/U.S. environments and results; and
- a quantitative analysis of rental housing investments by RPPs/RRSPs.

The evidence presented in the study strongly supports the contention that RPPs/RRSPs do under-invest in rental housing. Two general categories of evidence bolster this contention.

First, statistical evidence presented in the report indicates that RPPs/RRSPs hold far less real estate in their portfolios than the share of national wealth that is comprised of that asset. Real estate accounts for 27 percent of the value of national assets, but only for about 4 percent of pension fund assets and less than 1 percent of money manager assets. Data show that the real estate holdings of pension plans in Canada are comparable in magnitude to holdings by U.S. funds. In terms of rental housing specifically, holdings by pension funds and money managers are minuscule--0.1 percent of assets in the case of the former and 0.05 percent in the case of the latter. The data show that the trend is stagnant. Over the past five years, real estate as a percentage of total pension fund assets has declined by about 0.6 percentage points. This breaks down very roughly into a 0.7 percentage point drop for commercial properties and a 0.1 percentage point gain for rental housing properties.

The second category of evidence derives from the responses to the survey undertaken as a component of the study. These responses indicate that managers of pension funds and money management firms have strongly held negative views towards rental housing investments.

This evidence of under-investment does not imply that these organizations <u>should</u> under current circumstances hold more rental housing assets. Such a conclusion would imply that RPP/RRSP investment managers either don't know their business or are behaving irrationally--both of which are unlikely given the high degree of competition within the financial industry. Rather, the assertion should be interpreted as indicating that there is substantial scope for increasing

investments in rental housing by these organizations, assuming that the reasons for the low levels of investment are uncovered and that at least some of these obstacles are eradicated.

B. Obstacles to RPP/RRSP Investments in Rental Housing

The study identified myriad factors that could be impeding rental housing investments by RPPs/RRSPs. First, data on returns to real estate investments for Canada, the U.S. and various other countries indicate that they have consistently been lower and more volatile than the returns for stocks and for most of the time even bonds. Evidence for the U.S. shows that these low returns also apply in the case of rental housing investments. While there is currently no direct evidence specifically relating to rental housing in the case of Canada, the available indirect evidence suggests that returns may have been low relative to other types of investments. Second, the regulatory environment imposes numerous quantitative and qualitative restrictions on RPP rental housing investments. Third, income tax rules–intended to protect beneficiaries' assets and to ensure fiduciary responsibility– place complex additional restrictions on the ability of both RRSPs and RPPs to make rental housing investments. Fourth, there may be theoretical issues relating to modern portfolio management at play, including recent developments in the area of financial derivatives, that may be negatively affecting the demand for real estate investments in pension portfolios. Finally, it is clear that most pension and money managers have very negative views towards rental housing investments for a variety of other reasons relating to the specific features of such investments. The combined effect of all these factors is that rental housing investments are simply outside the sphere of what most managers consider potential investments to include in their portfolios.

C. What Can be Done to Improve the Investment Environment for Rental Housing

By-and-large, while fund managers are negatively predisposed toward rental housing investments, they did not have strong opinions about what factors could improve the investment climate. This may simply reflect that their thinking has not progressed to this stage or that they are not familiar enough with policy issues to feel comfortable making precise suggestions. Nevertheless, it is possible to make some suggestions for improvements based on the analysis, and the specific and general comments of the survey respondents. However, it should be emphasized that, while the numerous changes discussed are required to improve the environment for rental housing investments by RPPs/RRSPs, there is still insufficient knowledge about the relative importance of the different obstacles to predict the result on increased investment.

Identify and Eliminate Factors Contributing to Low Rental Housing Returns

Chapter V presented evidence indicating that real estate returns over a substantial period of time have generally underperformed both broad-based measures of stock returns and long-term bonds. This is true for a variety of countries including Canada and the U.S. Statistical evidence

presented also indicates that unhedged real estate returns are generally more volatile than returns to equities and that even hedged real estate returns are more volatile in the case of Canada. Thus, real estate returns in Canada appear to be both lower than those of equities and substantially more volatile.

While the author did not have access to rate of return information for Canada that related specifically to rental housing, information for the U.S. indicates that the recent low rates of return extend to that sub-sector of the overall real estate industry. Additional research is necessary to determine if the low rates of return for real estate in general extend to rental housing. It may be that perceptions about rental housing by pension funds and money managers is being contaminated by overall perceptions–a distinct possibility given the lack of knowledge by managers about the sector–but there is currently insufficient information to determine this.

Only one fund specifically referred to "low return" as a significant obstacle to investment in rental housing, although a number of general comments were made that expected returns didn't warrant the effort that was required to make such investments. None of the possible other initiatives to improve the attractiveness of rental housing investments to fund managers are likely to have much positive effect if low returns are confirmed for rental housing and if the root causes for this are not remedied. Among the factors identified by the respondents that might have a bearing on this are:

- rent controls;
- zoning restrictions and other regulatory rules;
- competition from public housing; and
- income tax rules that deter the turnover of existing buildings.

None of the survey respondents identified the taxation of rental housing–e.g., specific income, GST/HST, property, or provincial sales tax rules--as a factor negatively affecting returns (or indeed, as an obstacle to investment). It is possible that this may simply reflect their lack of familiarity with the nuances of this type of investment.

Existing indirect evidence suggests that low rates of return to Canadian rental housing investments may be an obstacle to increased investment. Priority should be given to additional research to confirm whether or not this is true and, if true, to identify the specific causes so that steps can be taken to remedy the situation.

Make Improvements to The Legislative/Regulatory Environment

1. Complete harmonization of the federal-provincial pension investment rules: Most pension plans in Canada fall under provincial regulatory authority, although about 10 percent of plans are regulated federally. Considerable progress has been made in harmonizing the federal and provincial pension investment rules. For example, all of the provinces have adopted the

"prudent person portfolio" approach to fund administration. Most have also either adopted the federal investment rules contained in the Regulations to the *Pension Benefits Standards Act* (*PBSR*) and *Schedule III* of the Regulations or introduced their own legislation that closely mirrors the federal rules. In addition, all provinces require the development of, and adherence to, a formal investment plan that is either equivalent to or closely akin to the Statement of Investment Policies and Procedures (SIP&P) at the federal level. Still there is incomplete harmonization of the pension investment rules for the provinces east of Ontario. This unnecessarily complicates the investment environment for rental housing investment. Complete harmonization is suggested.

2. Examination and possible relaxation of some of the quantitative regulatory restrictions affecting rental housing investments: The switch to the "prudent person portfolio" framework represented a marked change in the regulatory philosophy. Many rules governing permissible investments were eliminated and pension managers were given much more latitude in determining which investments were suitable for their portfolios. The focus shifted from one centred around bureaucratic rules to one relying to a much greater extent on the professional competence and expertise of fund sponsors, managers and advisors. Nevertheless, a number of quantitative investment restrictions were retained that can negatively impact the ability of pension funds to make rental housing investments. Generally, the restrictions can be summarized as follows:

- not more than 10 percent of a fund's assets may be invested in a single person or corporation or two or more affiliated entities;
- a fund may not control more than 30 percent of the voting shares of a corporation;
- the 10 percent and 30 percent restrictions do not apply to investments in a real estate investment corporation (REIC);
- the 10 percent restriction does not apply to investments made through mutual or pooled funds that comply with the investment rules of Schedule III of the *PBSR*;
- no more than 5 percent of a fund's assets may be invested in a single parcel of real property; and
- all real and resource properties together may not exceed 25 percent of total assets.

The restrictions limiting investment in a single parcel of land to not more than 5 percent of a fund's assets and the restriction limiting investment in a single entity to not more than 10 percent of the fund's assets largely eliminate the possibility of smaller pension funds participating directly in rental housing investments. While the 10 percent restriction does not apply to the shares of a REIC, there is a look-through for the percentage tests in respect of REIC holdings. To see the effect of the 5 percent restriction, consider a 100 unit apartment costing $5 million. To make say five such investments, in order to take advantage of economies of scale in investment and property management expertise and to achieve a reasonable degree of property diversity, would require the fund to have at least $500 million in assets. Data indicate that fewer than half of funds have assets of this magnitude (Table VI.1). Moreover, since many larger

pension funds are actually comprised of more than one underlying employee plan (although they may be managed jointly) the constraint would also be binding on many larger plans. Unfortunately, it is not possible to estimate the magnitude of this because all available pension data sources present only aggregated data for organizations that have more than one plan. However, existing data indicate that there are many organizations with multiple plans. This means that a majority of plans would have to make any rental housing investments through joint investments with other plans or through pooled funds (both of these are discussed below).

While this restriction is likely to be a deterrent to investment for many plans, it may not have a material effect on the aggregate flow of investment money to rental housing. This is because plans with less than $500 million in assets account for less than 3 percent of total pension assets (Table VI.1), although the figure might be significantly higher if detailed data were available on multi-plan organizations. Thus, while an increase in the single investment limit to say 10 percent would permit many more firms to make rental housing investments (at least 20 percent more, according to Table VI.1), it might not have a significant effect on investment funds flowing to the sector. It would appear then that marked improvement in the magnitude of rental housing investments would likely have to come about as a result of increased propensity to make such investments by larger funds. Nevertheless, it may be worthwhile to consider relaxing the 5 percent limit (and possibly also the 10 percent limit and the 25 percent combined real property and resource property limit) in order to encourage rental housing investments among a broader spectrum of plans and to foster a more generally receptive environment to such investments within the pension industry. It may well be feasible to increase these limits substantially given the current widespread use of derivatives by fund managers and the possibility of mitigating virtually any type of risk through their use. Expansion of the percentage regulatory limits would enhance the attractiveness of rental housing investments through virtually all types of vehicles. Currently, some plans may simply not be making rental housing investments because the investment constraints are too restrictive.

3. Development of clear qualitative regulatory guidelines on rental housing investments: With the switch to the "prudent person portfolio" approach to pension regulation, funds must still meet rigorous general regulatory standards to obtain and maintain registered status, e.g., with respect to prudence of investments, and actuarial viability. For example, the qualitative requirements of the *PBSA/PBSR* would necessitate greater diversification in rental housing investments than is mandated by the quantitative restrictions, including with respect to type and location of property. However, there are no clear guidelines on what constitutes prudent investment in rental housing. A detailed SIP&P that specifies, among other things, the fund's investment strategy, categories of investments, approach to diversification, asset mix and objectives must be developed by the fund administrators and filed with the regulatory authorities. The SIP&P will reflect any negative attitudes of fund administrators and investment managers towards rental housing investments, as well as any uncertainties they have about prudent investment behaviour. While, in principle, the SIP&P can be modified, negative attitudes that are based on current perceptions and uncertainties may become institutionalized and could create long-term obstacles to investing in rental housing. A number of survey

respondents referred to the fact that their investment plans do not permit rental housing investments, or that they viewed investment in rental housing as being inconsistent with prudent investment behaviour.

As yet, there are no explicit regulatory guidelines about what constitutes prudent investment management in the case of real estate in general or rental housing explicitly. This may create uncertainty and contribute to the reluctance of pension managers to make rental housing investments, particularly given the prevailing lack of knowledge and experience among investment managers with this type of investment. It may also magnify investment managers' aversion to the potential legal liability risks associated with rental housing investments (other than corporate or limited partnership vehicles). Investment managers may not want to be perceived by regulators as "imprudently" exposing pension assets to unnecessary potential adverse legal judgements, even if the actual likelihood of this is relatively remote. Indeed there is evidence that these types of concerns are not uncommon in the pension community; a number of the survey respondents expressed the view that rental housing investments were inconsistent with the prudent person portfolio philosophy. The development of regulatory guidelines that clarified the concept of prudent portfolio management in this area could only enhance the investment climate.

4. Examination and possible amendment of restrictions under the *Income Tax Act*: The impact of the income tax system was also examined in detail. In the case of RRSPs, investments must be approved as "qualified investments" under the federal *Income Tax Act* (*ITA*). In the case of RPPs, in addition to requiring adherence to the *PBSA/PBSR* or provincial regulatory legislation, the *ITA* imposes complex conditions on the different arrangements that a fund can utilize to invest in rental housing, such as those through various pooled fund, corporate, and partnership arrangements. Also, certain arrangements for structuring rental housing investments have complex interactions with the *ITA* foreign property rules, which limit foreign investments for an RPP or RRSP to a maximum of 30 percent of the fund's assets. Some arrangements run the risk of being classified as foreign property and thus either using up valuable foreign property room or exposing the fund to penalty provisions; alternatively, other arrangements may earn extra foreign property room for a fund. In general, while there are a wide variety of options available for pension investments in rental housing, fiduciary, trust and income tax restrictions create many specific obstacles to pension funds that do not exist for other investors. Specific suggestions for consideration are set out below.

a) Restrictions on RRSP investments: Income tax legislation generally forbids direct investment by RRSPs in real estate, including rental housing. RRSPs can invest in CMHC approved mortgages, shares of a mortgage investment corporation that are listed on prescribed stock exchanges, National Housing Act mortgage-backed securities, and real estate investment trusts (REITs), which are actually a type of closed-end mutual fund trust. The only other option for RRSP investment is indirect investment through other mutual fund trust arrangements. RRSP "registered investments," cannot invest in real estate. A trust governed by an RRSP is subject to the foreign property investment restriction.

While the issues are complex, consideration could be given to permitting RRSPs to hold direct passive real estate (including rental housing) investments, subject to limits on the percentage of assets that can be held in that form. Also, RRSPs could be permitted to hold shares jointly with pension plans in REICs and also any new partnership or pooled trust vehicles that might be developed (see below). This would allow broader pooling of funds for direct investment in rental housing. The REIC form provides full liability protection, is non-taxable and can accumulate earnings for property improvements and acquisitions. Real estate could also be made an eligible investment for "registered investments." Of course, the suggestions below relating to REITs would also benefit RRSP investments through that vehicle.

b) Restrictions on RPP investments: In the case of an RPP, registration for income tax purposes requires that the fund not make any investments that are ineligible investments under the relevant federal or provincial regulatory legislation. RPPs are, however, also subject to the foreign property investment restrictions and there are a host of other complications that arise for investments made through different types of investment vehicles. The suggestions below concentrate exclusively on equity investments since it is primarily this form of investment that faces widespread unpopularity among RPP managers. Moreover, no particular difficulties were encountered in the case of non-equity forms of investment such as mortgages, mortgage-backed securities, mortgage investment corporations or participating loans.

i) Direct ownership: This is the simplest type of investment and takes advantage of non-taxability of pension funds, thus avoiding double taxation. There are potential liability risks associated with direct ownership, although legal opinion seems to be that these tend to be exaggerated. Relaxation of the investment limits in the pension regulations and clarification of what constitutes "prudent" investment behaviour in the context of rental housing as suggested above could change the aversion that pension investment managers currently hold toward these types of investment.

ii) Investment through taxable corporations: While the REIC vehicle, because of its non-taxable status, would generally be a much-preferred investment vehicle to a taxable corporation, the latter might be appropriate and preferred in certain circumstances. The suggestions above for direct ownership investments are applicable here as well.

iii) Partnership arrangements: The pooling of financial resources among funds through partnership arrangements permits access to large property investments, the achievement of adequate portfolio diversification across property types, and access to investment and property management expertise. Exposure to legal liability is reduced though not eliminated through the diluting of risk across a larger asset pool and can be further lowered through a clause in the partnership agreement or even through the formation of a limited partnership in which the pension funds are limited partners. Because partnership income is flowed through to the partners, there is no double taxation in the case of pension fund partners. Perhaps the major drawback is that most partnership arrangements are deemed to be foreign property under income tax rules and thus use up the limited foreign property investment room. Partnership

arrangements in the U.S. are not bound by foreign property limits. Consideration could be given to the development of new partnership vehicles, including limited partnerships, that are intended exclusively for domestic real estate investments and that would avoid characterization as foreign property (see the box below). Such a vehicle would also facilitate the commingling of fund assets through a REIC, and would eliminate a major concern with joint ventures (see below). Changes could also be considered that permitted a greater element of joint participation in the active management of properties by pension funds that are limited partners in limited partnership arrangements. This would create features similar to the limited liability company (LLC) in the U.S., where full liability protection is provided to pension fund shareholders, while at the same time permitting them to participate jointly in active management.

The 1985 federal budget introduced measures, which became law in 1986, designed to enhance the environment for pension fund investments in small and medium businesses (SMB). The creation of similar vehicles could be considered in the case of rental housing and other real estate investments. The 1985 measures enhanced SMB investment in two ways. First, it introduced new regulations which simplified the legal requirements for forming pooling vehicles, and second, it linked the amount of investment in small business through qualifying vehicles to the foreign property limit. The main elements of the changes were:

- to allow various deferred-income plans, including RPPs and RRSPs, to invest in securities of qualifying SMBs;
- to create three new types of qualifying pooling vehicles for SMB investments, namely, Small Business Investment Corporations (SBICs), Small Business Investment Limited Partnerships (SBILPs) and Small Business Investment Trusts (SBITs), which were exempt from classification as foreign property; and
- to allow RPPs to invest $3 in foreign investments for every $1 which they invest in qualifying pooling vehicles or businesses.

A study conducted after the introduction of the measures (Jog and MacNevin, 1988) concluded that the measures would substantially increase SMB investment above historical patterns.

iv) Joint venture arrangements: Joint venture arrangements permit the pooling of capital resources, and reduce the problems of liquidity and liability that arise with sole ownership arrangements. Income is taxable by the separate participants, which takes advantage of the non-taxable status of pension funds. Joint ventures have been used extensively and successfully in oil and gas and other natural resource endeavours. While in principle joint ventures are not defined to be foreign property, because of the undeveloped nature of such investments in the real estate sphere, they run the risk of being considered partnership arrangements and thus being classified as foreign property. In the absence of exemption of partnerships from foreign property restrictions as suggested above, perhaps greater clarification by the taxation authorities of acceptable joint venture arrangements would lessen uncertainty surrounding this form of investment. This might encourage greater joint participation of funds, both directly and through real estate investment corporations (REICs).

v) Investment through REICs: The REIC is currently perhaps the preeminent investment vehicle for rental housing and other real estate investments. Tax-exempt REICs fully utilize the advantages that pension funds have as non-taxable entities. They also limit the liability exposure of a pension fund's assets to the amount of the funds invested in REIC shares. Liquidity problems associated with direct ownership are lessened, especially when there is more than one investor in the REIC, since shares could be disposed of to other investors without sale of the underlying real estate property. Even a small fund could pool a limited portion of its assets with those of other REICS, pension funds or taxable investors to achieve economies of scale in developing or acquiring investment and property management expertise. Cash flow problems that may be inherent in real estate investments could also be reduced through the various multi-tiered leasing arrangements that are possible. The REIC has the advantage that it can accumulate earnings tax free to be used for purposes of property improvement or acquisition, while the U.S. LLC must pay out all earnings to avoid double taxation.

The Canadian REIC is perhaps most directly comparable to the U.S. Title Holding Corporation, which is an important investment vehicle for U.S. pension funds. Canadian REICs appear to be superior to Title Holding Corporations since REICs provide increased access to capital through commingling, less onerous management restrictions, much more flexible asset holding rules, and the ability to accumulate earnings for property improvement or acquisition purposes.

A REIC has to restrict its activities at all times to acquiring, holding, maintaining, improving, leasing, or managing capital property that is real property or an interest in real property owned by the REIC, another REIC or an RPP. Consideration could be given to improving the REIC by permitting it greater flexibility in holding idle land for later development and with respect to the actual development of properties. This would allow a REIC to participate in the financing and construction of new rental housing projects, not just in acquiring and improving existing properties.

In determining whether or not the various quantitative regulatory restrictions are met–ie., the 5/10/25 percent limits described earlier--there is a look-through to the underlying holdings of the REIC. Thus, for example, a pension fund's direct holdings of rental housing would be combined with its holdings through REICs in applying the limits. If a pension fund is a participant with other pension funds in a REIC, the REIC's holdings would be apportioned to each participating fund in proportion to its share ownership in the REIC. Any relaxation of the limits would therefore also benefit investments through REICs. The look-through also applies in the case of qualitative considerations governing pension fund investments discussed above. Therefore, greater clarification by the regulatory authorities of what constitutes "prudent" investment for rental housing would also be beneficial in the case of REIC investments. The suggestions above relating to partnerships, joint ventures and RRSP participation in REICs should also encourage co-investments through this type of arrangement.

vi) Investment through pooled fund (trust) vehicles: Pooled fund trust arrangements are one important way of permitting both small and large pension funds to participate in rental housing

investments and to achieve an acceptable degree of diversity in property holdings. RPPs are generally permitted to invest in pooled vehicles under both federal/provincial regulatory and tax rules. If the pension fund invests more than 10 percent of its assets in a pooled fund, the pooled fund must comply with the investment rules.

Investments through pooled vehicles that are not carefully structured can give rise to adverse consequences under the foreign property rules of the *ITA*. Interests in registered investments, pooled fund trusts, master trusts, and quasi mutual fund trusts are not considered to be foreign property although they are subject to the foreign property rules. The last three are viable vehicles for rental housing investments by RPPs. Pooled fund trusts have the benefit of providing a potential bump-up in an RPP's foreign property room. However, they have the disadvantage that they must meet stringent income and asset tests. They are also not tax exempt so that earnings must be flowed through to the pension fund each year to avoid tax. Master trusts face less stringent tests however they do not provide a bump-up in foreign property room and the pension fund may invest in foreign property through the trust or outside of it but not both. They are, however tax exempt. A certain type of quasi mutual fund trust can hold real estate without meeting the stringent income and asset tests of the pooled fund trust. It provides the bump-up in foreign property room; however, its principal drawback is that a class of its units must be qualified for distribution to the general public, which adds an extra layer of legal procedure and expense.

The existence of the foreign property rules in Canada thus force pension funds to choose between flexibility in their pooled trust arrangements on the one hand, or gaining access to improved options for foreign property investments and accepting more stringent restrictions, on the other. Pooled trust arrangements in the U.S. have the advantage of not having to confront foreign property limits. Moreover, there is no private pooled trust arrangement in Canada (as distinct from the publically traded REIT) that is designed explicitly to facilitate real estate investments.

Similar to the suggestion above relating to partnership vehicles, consideration could be given to the development of new pooled trust arrangements that are intended exclusively for real estate investments. The trusts would ideally be non-taxable, able to accumulate funds for property improvement, acquisition and development, open-ended, and exempt from the foreign property rules. If the suggestions were implemented, pension funds would have a full array of potential pooling vehicles–corporate (REIC), partnership and trust-- that had desirable features for real estate investment. This would permit funds to choose the vehicle that best met their own particular requirements.

vii) Investment through REITs: REITs are structured as closed-end mutual fund trusts in Canada and are a potentially important vehicle for investment in real estate for both RPPs and RRSPs. REITs can hold either commercial or residential real estate. REITS are securitized and traded in open markets and on stock exchanges. REITs are not necessarily a replacement for direct real estate holdings in portfolios; since the correlations of REIT returns with those of the general

market are significantly higher, they don't provide the potential risk-offset benefits. A number of survey respondents indicated that they viewed REIT units as indirect real estate instruments that were quite distinct from direct holdings. To this point in time, the REIT industry in Canada is relatively small and is essentially a small cap industry attractive primarily to the smaller investor with probably limited appeal to large institutional investors like pension funds, although pension funds and RRSPs do hold small amounts of REITs. The potential liability risk exposure associated with REITs also may limit their attractiveness to pension funds, especially given the restrictions under the prudent person philosophy. To avoid taxation and take advantage of the non-taxable status of pension funds, earnings must be passed on. REITs are limited in their potential to expand because of the necessity to pay out income, their closed-end structure, and by tax and trust restrictions that impede their ability to become fully integrated real estate companies.

U.S. REITs have advantages over Canadian REITs in that:

- they can be incorporated and provide full liability protection;
- they can function as fully integrated companies that can finance, develop, own and manage rental housing properties; and
- the UPREIT (Umbrella Partnership REIT) and DownREIT variants of the vehicles in the U.S. provide a deferral of tax to investors on property transfers into the REIT. This provides investors with the ability to lock-in the gain on the appreciated value of real properties during up-cycle periods without triggering capital gains tax.

Consideration should be given to improving the REIT vehicle by incorporating elements of these advantages.

Promote the Desirable Risk-profile Attributes of Rental Housing Deriving from Modern Portfolio Theory

The theoretical approach to portfolio management followed by pension managers can affect the attractiveness of an asset such as rental housing. This is because different frameworks focus on different risk-return features of assets and the way in which these characteristics interact with those of other assets in a portfolio setting. The major models in the modern theoretical finance literature include:

- asset-specific and portfolio mean-variance models;
- the capital asset pricing model (CAPM);
- asset pricing theory (APT) models;
- the international CAPM (the ICAPM); and
- the international APT (the IAPT).

The survey response in Chapter VI indicate that:

- 50 percent (of the 10 funds that responded here) do not use a specific formal model,
- 20 percent use a portfolio mean-variance approach,
- 10 percent use an asset-specific mean-variance approach,
- 10 percent use a synthetic derivative based approach, and
- 10 percent rely on fundamental analysis applying to each asset.

A number of the survey respondents indicated that they do not consider rental housing to be an asset class and do not even consider it when determining their asset allocations.

These responses are significant since they indicate that virtually none of the funds, in a formal sense, make use of information relating to the specific risk profiles of individual assets that derive from modern portfolio theory. Managers appear to rely primarily on judgement and broad-based diversification across numerous assets to neutralize "alpha risk." Alpha risk is the idiosyncratic risk of an asset that measures the excess return on the asset when excess market return is zero. In principle, it should be equal to zero in equilibrium through rational market activity of investors. Alpha risk of individual securities can be eliminated in a portfolio simply by including sufficient numbers of diverse assets.

Managers appear to pay relatively little attention to the "beta" risk (or systematic, nondiversifiable risk) of assets that arises under the CAPM or the ICAPM models, or the "beta profile" risk that arises under the APT and IAPT models. The beta risk of the CAPM and ICAPM models measures the way in which the asset's excess return oscillates as the market return oscillates. The beta risk profile of the IACAPM and IAPT models allows for multiple sources of systematic risk, which in addition to market risk, could include such factors as investor confidence, interest or inflation rate changes, or real business cycles.

The fact that managers appear to pay little attention to the beta characteristics of assets could have significant negative implications for the demand for rental housing investment and other categories of real estate investment. This is because these assets are frequently promoted by analysts and academics on the basis of their beta profile characteristics (particularly their inflation-hedging attributes and their low correlations with the stock market). The findings from the survey that pension funds and money managers do not fully utilize the insights available from research is not unique to this study. The survey findings are consistent with research by Louargand (1992), who found that pension managers were very cautious in adopting advances in modern portfolio theory and in some cases continued to follow practices that had been discredited in the academic literature for many years.

It would appear then that the rental housing industry has a major selling job in front of it if it is to convince such managers of the special portfolio diversification advantages from holding rental housing investments. Any initiative to promote greater rental housing investment should simultaneously promote the risk profile attributes of rental housing and the added risk reduction advantages they can involve when included in portfolios with stocks, bonds, market index funds

and so on. The inclusion of real estate can lessen reliance on derivatives, which are currently widely used by fund managers in Canada to construct designer portfolios with selected risk-return characteristics. Research by De Wit (1996) for the Netherlands indicates that the effects on the demand for real estate assets can be dramatic. He finds that pension funds and insurance companies in the Netherlands typically allocate about 15 percent of their portfolios to real estate equity, roughly four times the historical level for Canadian and U.S. funds. This is because of different approaches to portfolio management in the Netherlands, including the fact that Dutch institutional managers focus less on the risk-return characteristics of real estate and much more on its inflation-hedging features than do U.S. institutional managers. This is not, however, intended to downplay the importance of getting to the root of the low rates of return in real estate. A unique risk profiles for a specific asset can help in carving out a portfolio niche for it but it can not completely overcome the disadvantages created by low returns.

Improve Access to Specialized Investment and Property Management Expertise

Numerous comments were made by survey respondents that indicated that they had insufficient investment or property management expertise to permit them to make rental housing investments, and that such expertise was not, in their view, readily available. Some managers also indicated that they were unaware of suitable investment opportunities and that they were unable to value such investments, unlike stock or financial instruments for which investment information and market prices are readily available and continuously updated. Comments also indicated that there were concerns about the potential negative perceptions generated by pension funds being involved in, for example, tenant-landlord disputes, evictions, or problems with rent controls. It was noted that commercial real estate investments are much more popular because required expertise is much more readily available and many of the other negatives do not exist or are much less significant factors.

Improved access by fund managers to professional investment and property management expertise would reduce these problems and help to break down existing barriers. Therefore, initiatives to increase RPP/RRSP investments in rental housing should include an assessment of the best way to alleviate existing deficiencies.

D. Summary

In summary, the study identified many obstacles to rental housing investment by RPPs and RRSPs. Attitudes towards rental housing by investment managers are very negative. Evidence indicates that because of these obstacles and attitudes, equity investment is much lower than would otherwise be expected. A number of initiatives could be undertaken to improve this situation, including:

- determine whether low rates of return to real estate also extend to rental housing and, if so, take steps to identify and eliminate the contributing factors

- make improvements to the regulatory environment, such as:
  - completely harmonize the federal-provincial pension investment rules
  - relax the quantitative pension investment limits under federal and provincial regulations
  - develop clear qualitative regulatory guidelines on prudent investment in rental housing
- amend restrictions under the *Income Tax Act* to:
  - permit RRSPs to hold direct passive rental housing investments and interests in real estate investment corporations (REICs), and new partnership and pooled trust vehicles
  - develop new partnership vehicles for RPP rental housing investments that:
    - are exclusively for domestic rental housing investments
    - are not treated as foreign property
    - permit greater participation in management by limited partners
  - clarify acceptable joint venture arrangements for RPPs in rental housing
  - permit REICs to hold idle land and to participate in developing properties
  - develop new pooled trust investment vehicles for RPP rental housing investments that are
    - non-taxable
    - able to accumulate earnings
    - open-ended
    - exclusively for domestic investments, and
    - exempt from foreign property rules
  - improve REITs as a vehicle for investment in rental housing by:
    - improving liability protection for investors
    - permitting REITs to function as fully integrated companies able to finance, develop and manage rental housing properties
    - allowing tax-deferred property transfers into REITs, as is currently possible under U.S, rules
- encourage the rental housing industry to promote to RPP/RRSP investment managers the desirable risk-profile attributes of rental housing that derive from modern portfolio theory
- improve access to specialized investment and property management expertise for RPP/RRSP funds to better enable them to identify, make and manage rental housing investments.

If such actions were successful, they could significantly increase equity investments in rental housing by RPPs/RRSPs since total assets in these plans are almost $1 trillion and almost none of this is currently invested in such properties. Any marked increase in equity financing could make an important contribution to expanding the available stock of rental housing units. While quantification of the effects of this are beyond the scope of this study, it is reasonable to expect that this could assist in lowering financing costs for rental housing and ultimately rents.

APPENDIX A: THE SURVEY QUESTIONNAIRE

QUESTIONNAIRE: PENSION INVESTMENTS IN RENTAL HOUSING; PENSION FUNDS AND MONEY MANAGERS

This questionnaire should be completed by the investment manager most familiar with the investment portfolio and practices of the organization.

SECTION A: Background Information

A.1 Please provide your name, position and phone number below.

Name	
Position within organization	
Phone number	

A.2 What is the current market value of the **total RPP and RRSP funds** managed by your organization?

RPP ($ 000)	RRSP ($ 000)	Total RPP+RRSP ($ 000)

ALL OF THE REMAINING QUESTIONS RELATE ONLY TO THE RPP AND RRSP FUNDS ADMINISTERED BY YOUR ORGANIZATION. IF YOU DO NOT MANAGE SUCH FUNDS, PLEASE DO NOT COMPLETE THE REMAINDER OF THE QUESTIONNAIRE AND NOTIFY THE CONSULTANT BY RETURN E-MAIL.

IMPORTANT: PLEASE NOTE THAT THE QUESTIONS RELATE TO ALL OF THE RPP/RRSP FUNDS MANAGED BY YOUR ORGANIZATION TAKEN TOGETHER, NOT TO INDIVIDUAL FUNDS. THEREFORE, IF YOU MANAGE MORE THAN ONE FUND, DATA SHOULD BE AGGREGATED.

A.3 Does your organization currently invest any RRSP/RPP funds in rental housing (indicate with an x)?

Yes	No

If your answer is **"Yes"** please **continue**. If your answer is **"No"** please **go to question A.11**.

A.4 Please indicate below the **percentage** of your **RPP/RRSP funds** currently invested in **rental housing** by **type of legal arrangement**. Total should equal 100%.

TYPE OF INVESTMENT	**%**
Direct ownership	
Direct share investment	
Mortgage backed securities	
Mortgages	
Participating or other loans	
REIT	
Pooled fund trusts	
Master trusts	
Mutual fund trusts	
Other trust arrangements	
Limited Partnerships	
Other partnership arrangements	
Pension real estate investment corporation	
Other Corporate arrangements (specify)	
Other (specify)	
TOTAL	**100%**

A.5 Are there specific reasons why your organization prefers certain types of legal arrangements for investing RPP/RRSP funds in rental housing?

Yes	No

If your answer is **"Yes"**, please explain in the space below.

A.6 Are there specific reasons why your organization prefers debt instruments over equity instruments for rental housing investments?

Yes	No

If your answer is "**Yes**" please explain in the space below.

A.7 Please estimate as accurately as you can for the following years the **percentage** of the **total market value** of your RPP/RRSP funds that have been invested in **rental housing**.

	1980	1985	1990	1995	2000
In Total					

- through debt/mortgage instruments					
- through equity or direct ownership					

A.8 Please fill in the following table on the number of rental housing buildings and units currently held by RPP/RRSPs managed by your organization.

	Within Canada	Outside Canada
Total Number of buildings held		
Total number of units held		
- Number acquired as newly built units		
- Number acquired as older or existing units		

A.9 Please specify below the number of rental housing units currently held **within Canada** by province and city.

Province/city	Number of Units

A.10 Are there specific reasons why you prefer certain locations, including foreign locations?

Yes	No

If your answer is "**Yes**" please explain in the space below.

A.11 Please specify below the planned future **change** in **rental housing** investment **within Canada** associated with your RPP/RRSP funds.

	Expected Change (+ or -)			
	Next 12 Months		Next 13 to 36 Months	
	# of Units	$ 000	# of Units	$ 000
Total all units				
- Newly built units				
- Older or existing units				

A.12 Which of the following best describes the portfolio management model or approach used by your organization in making RPP/RRSP investment decisions (**indicate one or more with x**).

Mean-variance model	
Capital asset pricing model (CAPM)	
International CAPM	

Arbitrage pricing theory (APT) Model	
International APT	
Other (specify)	
No specific investment model	

A.13 Please explain your portfolio selection process briefly below and identify any specific relevance to RPP/RRSP rental housing investment.

SECTION B: Impediments to RPP/RRSP Investments in Rental Housing

B.1 Please indicate with an x in the following table any of the factors that currently **impede investment** of RPP/RRSP funds by your organization in rental housing?

			If your answer is "Yes", please check the importance of the item with an x						
			Not very important						Very important
TYPE OF INVESTMENT IMPEDIMENT	**Yes**	**No**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Legislative or Regulatory Restrictions									
- Federal PBSA or equivalent provincial legislation									
- Federal or provincial RPP/RRSP regulations									
- The income tax foreign property rules									
- Other income tax rules on eligible investments									
- Rent controls									
- Other landlord-tenant legislation or regulations									
- Zoning regulations and rules									
- Other (specify)									
Internal Fund Management Considerations									
- "Prudent person" investment considerations									
- Fund charter									
- Fund investment objectives and guidelines									
- Formal portfolio management model or approach followed									
- General management attitudes									
- Lack of relevant investment expertise									
- Lack of access to property management expertise									

(Table continued on next page)

B.2 Please indicate below, in order of **decreasing** importance the three most important "top of the head" considerations that **limit the attractiveness** of RPP/RRSP investments in rental housing to your organization.

1	
2	
3	

B.3 Please provide precise details of the nature of the key impediments identified in questions B.1 and B.2 in the space below.

B.4 Are there potential changes to **current policies or practices** relating to any of the impediments identified in question B.1 or B.2 that could be made to increase the likelihood of RPP/RRSP investments in rental housing by your organization?

Yes	No

B.5 Please describe any recommended changes below.

B.6 Please specify below what the approximate **percentage increase** in rental housing investment would be for your organization (**over and above any currently planned investment**) if the key changes to policies or practices you may have recommended above were actually implemented.

	Percentage Increase in Dollars Invested	
	Next 12 Months	Next 13 to 36 Months
Total all units		
- Newly built units		
- Older or existing units		

SECTION C: Adequacy of Current Investment Instruments and Vehicles

C.1 Please indicate with an x any of the following types of investment instruments or vehicles that you think **could be improved** to encourage RPP/RRSP investments in rental housing.

TYPE OF INVESTMENT	x
Direct share investment	
Mortgage backed securities	
Mortgages	
REIT	
Pooled fund trusts	
Master trusts	
Mutual fund trusts	
Other trust arrangements	
Limited Partnerships	
Other partnership arrangements	
Pension real estate investment corporation	
Other Corporate arrangements (specify)	
Other (specify)	

C.2 Please describe below the nature of any inadequacies indicated in question C.1 and any suggested improvements you might have.

C.3 Are there any differences in investment instruments or vehicles currently used in the U.S. that you think would facilitate RPP/RRSP investment in rental housing if introduced in Canada? Please list and explain briefly.

Instrument or Vehicle	Recommended Change and Reason

GENERAL COMMENTS: Please provide in the space below any other comments you may have relating to pension and RRSP investments in rental housing.

THIS IS THE END OF THE QUESTIONNAIRE
THANK YOU FOR YOUR COOPERATION

APPENDIX B: THE SURVEY METHODOLOGY

The Survey Sample

The survey was sent to 160 organizations, consisting of eighty pension funds and eighty money managers. The organizations were selected on the following basis.

Eighty Pension Funds.

(i) Forty pension funds were selected from the largest 100 funds with assets greater than $700 million ("Top 100 Pension Plans", *Benefits Canada*, April 1998). The twenty largest funds were included plus twenty selected randomly from the remaining top 100. This ensured adequate dollar coverage, since the top twenty funds alone account for 68 percent of RPP assets.

(ii) Forty pension funds were selected randomly from among the bottom half of pension funds (in terms of asset size) from the full list of pension funds maintained by *Benefits Canada*. This component of the survey ensured that the views and problems of smaller funds were covered.

Eighty Money Managers

A substantial portion of pension funds are managed by independent money managers. These fund managers also manage the bulk of group and private portfolio RRSPs.

(i) The entire "top forty" money managers were included.

(ii) Forty other fund managers were selected randomly from the remaining full list of 146 money managers surveyed by *Benefits Canada* their annual survey, ensuring that the views of smaller organizations were adequately covered as well.

Distribution of the Survey

In the overwhelming majority of cases, the survey was e-mailed to the selected organizations. E-mail addresses and telephone and fax numbers of pension funds and money managers were obtained from the data file compiled from the master database of *Benefits Canada* (see below), while those for money managers were compiled from the *Benefits Canada* annual survey of money managers. If the organization indicated that it was unable to open the e-mailed version of the survey, a hard copy was faxed to it. The survey was distributed in two stages; the survey of money managers was sent on 16 June 2000, while the survey of pension funds was sent on 22 August 2000. Participants were given approximately one month to respond. Follow-up telephone calls were made to some of the participants to fill in missing information.

Matching Data File

To provide additional information on the surveyed funds, a data file was compiled from the 1999 master database on pension funds maintained by *Benefits Canada*. The data file gathered detailed information on all 80 pension funds included in the survey as well as an additional fifteen reserve funds. Five reserve funds were selected from each of three asset categories (small, medium and large). A similar but less detailed data file was also compile on the 80 money management firms included in the survey from the data contained in the annual survey of money managers provided by *Benefits Canada*.

APPENDIX C: LIST OF ORGANIZATIONS THAT WERE SENT THE SURVEY

Money Managers		Pension Funds	
1	Abn Ambro Asset Management Canada	1	Air Canada Pension Master Trust Fund
2	Acker Finley Inc.	2	Alberta Local Authorities
3	Acuity Investment Management Inc.	3	Alberta Special Forces
4	Aig Global Investment Corp. (Canada)	4	Alberta Universities
5	Alphaquest Capital Management Ltd.	5	Alberta Management Employees
6	Ami Partners Inc.	6	Alberta Teachers' Retirement Fund Board
7	Barclays Global Investors Canada Ltd.	7	Allianz Canada Inc.
8	Baring Asset Management	8	Avesta Sheffield Inc.
9	Beutel, Goodman & Company Ltd. Capital Management Inc.	9	B.C. Municipal Superannuation Fund
10	Bimcor	10	B.C. College Pension Fund
11	Brinson Partners Inc.	11	B.C. Public Service Superannuation Fund
12	Burgundy Asset Management Ltd.	12	B.C. Teachers' Superannuation Fund
13	Caisse De Dépôt et Placement du Québec	13	B.C. Hydro and Power Authority
14	Canadian Urban Equities Ltd.	14	Bank of Montreal
15	Canagex Inc.	15	BCE Inc.
16	Capital Guardian Trust Co.	16	Canada Mortgage & Housing Corporation Pension Fund
17	Capital Investment Research	17	Canada Trust Company
18	Centerfire Capital Management Inc.	18	Canadian Bible Society
19	Connor, Clark & Lunn	19	Canadian National Railways
20	Co-operators Investment Counselling Ltd.	20	Canadian Pacific
21	Deans Knight Capital Management Ltd.	21	Canadian Reynolds Metals Company Limited
22	Duncan Ross Associates Ltd.	22	Canadian Forces Personnel Support Agency
23	Edinburg Fund Managers Plc	23	City of Edmundston
24	Elliott & Page Ltd.	24	City of Winnipeg

25	Fleming Asset Management (Canada) Inc.	25	Dalhousie University
26	Foyston, Gordon & Payne Inc.	26	Emco Limited
27	Gabbay International Inc.	27	First Nations Insurance Services Ltd.
28	GE Investment Management Inc.	28	General Motors of Canada Ltd.
29	Genus Capital Management Inc.	29	Good Samaritan Society
30	Gestion Sodagep Inc.	30	Goodyear Canada Inc.
31	Gluskin Sheff & Associates Inc.	31	Grain Insurance
32	Greiner-Pacaud Management Associates	32	Griffin Canada Inc.
33	Greystone Capital Management Inc.	33	Gulf Canada Resources Limited
34	Gryphon Investment Counsel	34	Hospitals of Ontario Pension Plan
35	Guardian Capital Inc	35	Hotel Employees & Restaurant Employees Union Local 75
36	GWL Investment Management Ltd.	36	Hydro-Quebec
37	Hansberger Global Investors	37	Insurance Corporation of British Columbia
38	Integra Capital Management Corp	38	Ironworkers Saskatchewan Central Pension Trust Fund
39	J.P. Morgan Investment Management Inc.	39	Irwin Toy Ltd.
40	J.R. Senecal & Associates Investment Counsel Corp.	40	John Deere Limited
41	Jarislowsky, Fraser Limited	41	London Life Insurance Company
42	Knight, Bain, Seath & Holbrook Capital Management Inc.	42	Luscar Ltd.
43	Laketon Investment Management	43	Manitoba Civil Service Superannuation Board
44	Leith Wheeler Investment Counsel Ltd	44	Manpower Services (Toronto) Limited
45	Lincluden Management Ltd.	45	McGill University
46	Louisbourg Investments	46	Memorial University of Newfoundland
47	Magna Vista Capital Management	47	Montreal Urban Community Police Benevolent & Pension Assoc.

48	Mawer Investment Management	48	New Brunswick Public Service Superannuation
49	Mcdonald Investment Management Inc.	49	Newfoundland Telephone Company Limited
50	Mclean, Budden Ltd.	50	Noranda Inc.
51	Merrill Lynch Mercury Asset Management	51	North West Company Inc.
52	Montrusco Bolton	52	Nova Scotia Public Service
53	Morguard Investments Ltd.	53	Nova Chemicals Corporation
54	Natcan Investment Management	54	Ontario Northland Transportation Commission
55	New Brunswick Investment Management Corp.	55	Ontario Municipal Employees Retirement Board (OMERS)
56	Newcastle Capital Management Inc.	56	Ontario Teachers' Pension Plan Board
57	PCJ Investment Counsel Ltd.	57	Ontario Electricity Financial Corporation Pension Plan
58	Pembroke Management Ltd.	58	Ontario Pension Board
59	Penreal Capital Management Inc.	59	OPSEU Pension Trust
60	Pension Real Estate Advisors Inc.	60	PanCanadian Petroleum Limited
61	Perigee Investment Counsel Inc.	61	Powell Equipment Limited
62	Phillips, Hager & North Investment Management Ltd.	62	Praxair Canada Inc.
63	Pictet International Management	63	Premark Canada Inc.
64	Pinnacle International	64	Quebec Construction Industry
65	Primus Capital Advisors Co.	65	Quebec Teachers' Superannuation Plan (RRE)
66	Queensway Investment Counsel Ltd.	66	Quebec Government and Public Employees Retirement Plan (RREGOP)
67	RT Capital Management Inc.	67	Quebec-Telephone
68	Sanford C. Bernstein & Co. Inc.	68	RBC Dominion Securities Inc.
69	Laurvest	69	Regina Catholic Schools
70	Sceptre Investment Counsel Ltd.	70	Royal Trust Pension Plan
71	Scheer Rowlett & Associates	71	Saskatchewan Teachers' Federation Employees Pension Plan

72	Sprucegrove Investment Management	72	Sobey's Capital Inc.
73	St. Lawrence Financial Consultants Inc.	73	Teamsters & M.T.I.R.B. of Ontario Pension Plan
74	Standard Life Portfolio Management Ltd.	74	Toronto Dominion Bank
75	State Street Global Advisors	75	Trent University
76	TAL Global Asset Management Inc.	76	United Church of Canada
77	TD Asset Management Inc	77	University of Sherbrooke
78	Templeton Management Ltd.	78	Via Rail Canada Inc.
79	Valorem Gestion De Placements	79	Workers' Compensation Board - Northwest Territories
80	YMG Capital Management Inc.	80	Workplace Safety & Insurance Board Employees Pension Plan

REFERENCES

Association of Canadian Pension Management, "Uniform Pension Benefit Standards Act: Changing the Landscape of Pension Legislation in Canada," position paper, January, 2000.

Bajtelsmit, Vickie L. and Elaine M. Worzla, "Real Estate Allocation in Pension Fund Portfolios", *The Journal of Real Estate Portfolio Management*, vol. 1, no. 1, 1995, 25-38.

Benoit, Michel, "A Canadian View of Surplus and the Tek Case," paper presented at the 1998 Pension Lawyer's Association Conference, Somerset West, South Africa, February 1998.

Bond, Michael T. and Michael J. Seiler, "Real Estate Returns and Inflation: An Added Variable Approach," *Journal of Real Estate Research*, 15(3), 1998, 327-338.

Brooks, S. Michael, "Canadian Real Estate Investment Trusts: An Assessment of Risks," *North American Real Estate Review*, http://www.narer.com, undated.

Brueggeman, W.B., A.H. Chen and T.G. Thibodeau, "Real Estate Investment Funds: Performance and Portfolio Considerations," *Journal of the American Real Estate and Urban Economics Association*, 12(3), 1984.

Brzeski, W. J., A. J. Jaffe and S. Lundström, "Institutional Real Estate Investment Practices: Swedish and United States Experiences," *Journal of Real Estate Research*, 8(3), 1993, 293–323.

Canada Customs and Revenue Agency, "Registered Retirement Savings Plans - Qualified investments," *Interpretation Bulletin* 320R2, undated.

Canada Customs and Revenue Agency, "Foreign Property of Registered Plans," *Interpretation Bulletin* 412R2, undated.

Canada Customs and Revenue Agency, "Employees' Pension Plans, *Interpretation Circular* 72-13R8, undated.

Chandrashekaran, Vinod, "Time-Series Properties and Diversification Benefits of REIT Returns Vinod Chandrashekaran," *Journal of Real Estate Research*, 17(1/ 2), 1999.

Chilcote, Lee, "Real Estate Trends: UPREITs, Down-REITs And Other REIT Vehicles: Should You Go Along For The Ride?", http://www.arterhadden.com/publications/RealEstate/real0898a.asp#3, August 1998.

Chua, Adrian, "The Role of International Real Estate in Global Mixed-Asset Investment Portfolios," *Journal of Real Estate Portfolio Management*, 5(2), 1999, 129-37.

Cheng, Ping and Youguo Liang, "Optimal Diversification: Is It Really Worthwhile?," *Journal of Real Estate Portfolio Management*, 6(1), 2000, 7-16.

Clayton Research Associates and Fish Marks Jenkins Real Estate Consulting, Understanding Private Rental Housing Investment in Canada", Research Report, CMHC Housing Affordability and Finance Series, 1999.

Coward, Lawrence E., Organization for Economic Co-operation and Development, *Private Pensions in OECD Countries: Canada*, OECD Social Policy Studies No. 15, 1995.

De Santis, Giorgio and Bruno Gerard, "International Asset Pricing and Portfolio Diversification with Time-Varying Risk," *The Journal of Finance*, 52(5), 1997, 1881-1912.

De Wit, Dirk P.M., "Real Estate Portfolio Management Practices of Pension Funds and Insurance Companies in the Netherlands: A Survey," *Journal of Real Estate Research*, 11(2), 1996, 131-48.

Dumas, Bernard and Bruno Solnik, "The World Price of Foreign Exchange Risk," *Journal of Finance*, 50 (1995), 445-479.

Fama, Eugene F. and K. French, "The Cross Section of Expected Returns," *Journal of Finance*, 47, 1992, 427-465.

Fama, Eugene and Merton Miller, *The Theory of Finance* (Hinsdale, Ill.: The Dryden Press, 1972)

Feldstein, Martin, "Tax Policy and International Capital Flows," *Weltwirtschaftsliches Archiv*, 1994, 4, 675-97 (NBER Working Paper 4851).

Feldstein, Martin and C. Horioka, "Domestic Saving and International Capital Flows" *Economic Journal*, 90, 1980, 314-329.

Firstenberg, P. M., S. A. Ross and R. C. Zisler, "Real Estate: The Whole Story," *Journal of Portfolio Management*, 1988, 22–34.

Friedman, Harris C., "Real Estate Investment and Portfolio Theory", *Journal of Financial and Quantitative Analysis*, 4 (April 1970), 860-879

Gillin, Philip, "Real Estate Now", *Benefits Canada*, May 2000.

Gold, Richard B. "Why the Efficient Frontier for Real Estate is "Fuzzy,"" *Journal of Real Estate Portfolio Management*, 1(1), 1995, 59-66.

Goldman, Calvin S. and Richard F.D. Corley, "The Review of Joint Ventures Under the Canadian Competition Act," comments to the Federal Trade Commission Joint Venture Hearings, Federal Trade Commission Joint Venture Project, Washington, D.C. June 30, 1997, http://www.ftc.gov/opp/jointvent/jvent.htm.

Gyourko, Joseph and Edward Nelling, "Risk and Diversification in the Equity REIT Market," *Real Estate Economics*, 24(4), 1996.

Hamilton, Stanley and Robert L. Heinkel, *The Role of Real Estate in a Pension Portfolio* (Bureau of Asset Management, University of British Columbia; 1994).

Hamilton, Stanley, "Real Estate: Should Pension Funds Own More?" *Canadian Investment Review*, fall 1988.

Harrison, Andrew and Eva Krasa, "Fund Management: Regulatory Framework--Pension Fund Funding and Investment Requirements," in *Fund Management: Pension and Mutual Funds: Balancing Governance and Performance*, Insight Seminar, Sept. 21, 1994 (Toronto: Insight, 1994), tab 1, paper 2, 1-31.

Harvey, Campbell, "The Risk Exposure of emerging Equity Markets," *The World Bank Economic Review*, 9(1), 1995, 19-50.

Iezman, Stanley L., "Title Holding Corporations and Real Estate Investments of Pension Plans: Shielding Trustees And Plan Assets From Uninsured Liabilities," *Uninsured Liabilities, Property and Probate*, Summer 1999, http://www.akingump.com/library/publications/tax/att_art4.html.

Jacobson, Howard B., "Basics of Unrelated Business Income Tax: Use of Pass-through and Other Entities by Pension Funds," 1993, http://www.akingump.com/library/publications/tax/att_art4.html.

Jaffe, Austin J. and C.F. Sirmans, *Fundamentals of Real Estate Investment*, third edition (Englewood Cliffs, New Jersey: Prentice Hall, 1995).

Jog, Vijay and Alex MacNevin, "Government Policies, Pension Funds and the Environment for SMB Financing in Canada," *Journal of Small Business and Entrepreneurship*, vol. 5, no. 4, 1988, 34-46.

Karolyi, G. Andrew and Anthony B. Sanders, "The Variation of Economic Risk Premiums in Real Estate Returns," *The Journal of Real Estate Finance and Economics*, 17(3), 1998, 245-262.

Katmarian, Stephen and Stephen Lowrie, "The REIT Stuff," *Benefits Canada*, March 1997, 33-34.

Krasa, Eva M., "Pension Real Estate Investment Corporations: Compliance Issues", *Canadian Tax Journal*, vol. 43, no. 3, 1995, 610-638.

Krasa, Eva M., "Income Tax Implications of Joint Investment by Pension Plans Through a Private Pooled Fund Vehicle," *Canadian Tax Journal*, vol. 45, no. 1, 1997, 1-24.

Kruger, Herbert W., "Investments by US Pension Plans: A Tax and Regulatory Overview," in *Real Estate Transactions: Tax Planning for the Second Half of the 1990s*, (Toronto: Canadian Tax Foundation, 1996), pp. 14:1-14:30.

Liang, Youguo, Willard McIntosh and James R. Webb, "Intertemporal Changes in the Riskiness of REITs," *the Journal of Real Estate Research*, 10(4), 1995, 427-443.

Liang, Youguo and James R. Webb, "The Hedged REIT Index and Mixed-Asset Portfolios," Journal of Real Estate Portfolio Management, 2(1), 1996, 55-61.

Louargand, Marc A., "A Survey of Pension Fund Real Estate Portfolio Risk Management Practices," *Journal of Real Estate Research*, 7(4), 1992, 361-74.

Markowitz, Harry, *Portfolio Selection: Efficient Diversification of Investments* (John Wiley and Sons: New York, 1959).

McCue, Thomas E. and John L. Kling, "Real Estate Returns and the Macroeconomy: Some Empirical Evidence from Real Estate Investment Trust," *Journal of Real Estate Research*, 9(3), 1994, 277-87.

Merton, Robert, "Financial Innovation and the Management and Regulation of Financial Institutions, *Journal of Banking and Finance* 19, 1995, 461-481.

Muldowney, Peter, "REITs--Are They the New Real Estate", *Benefits Canada*, May, 1998, 33-36.

Mueller, Glenn R. and Steven P. Laposa, "Property-Type Diversification in Real Estate Portfolios: A Size and Return Perspective," *Journal of Real Estate Portfolio Management*, 1(1), 1995, 39-50.

Office of the Superintendent of Financial Institutions, "Guidelines for Governance of Federally Regulated Pension Plans," May1, 1998.

Office of the Superintendent of Financial Institutions, *Report on the Administration of the Pension Benefits Standards Act, 1985 For the Year Ended March 31, 1999.*

Office of the Superintendent of Financial Institutions, *Guideline for the Development of Investment Policies and Procedures for Federally Regulated Pension Plans*, April 2000.

Office of the Superintendent of Financial Institutions, *Derivatives Best Practices Guideline for Federally Regulated Pension Plans*, undated.

Olney, David "Reaping the Benefits of UPREITS," excerpt from Multifamily Executive, March 1997, http://www.multifamilyexecutive.com.

Oppenheimer, Peter H., "Hedging REIT Returns Using the Futures Markets,"*Journal of Real Estate Portfolio Management*, 2(1), 1996,41-53.

Organization for Economic Co-operation and Development, *Private Pensions in OECD Countries*, various countries, OECD Social Policy Studies, various numbers and years.

Roll, R., "A Critique of Asset Pricing Theory's Tests: Part I: On Past and Potential Testability of the Theory," *Journal of financial Economics*, 4 1977, 129-176.

Ross, Stephen, "The Arbitrage Theory of Capital Asset Pricing," *Journal of Economic Theory*, 13, 1976, 341-360.

Scholes, Myron, "The Economics of Hedging and Spreading in Futures Markets, *Journal of Futures Markets* 1, 1981, 265-286.

Shafer, Joel, "Investments in Real Estate by Tax-Exempt Entities and Intermediaries," in *Real Estate Transactions: Tax Planning for the Second Half of the 1990s*, (Toronto: Canadian Tax Foundation, 1996), 13, 1-17.

Shanken, J., "Multi-beta CAPM or Equilibrium APT? A Reply?, *Journal of Finance*, 40, 1985, 1189-1196.

Shanken, J., "The arbitrage Pricing Theory: Is it Testable?" *Journal of Finance*, 37, 1982, 1129-1140.

Sharpe, William, "Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk," *Journal of Finance*, 19, 1964, 425-442.

Statistics Canada, *National Balance Sheet Accounts, Annual Estimates*, CANSIM data, various years.

Statistics Canada, *Quarterly Estimates of Trusteed Pension Funds*, 1998 74-001.

Statistics Canada, *Trusteed Pension Funds, Financial Statistics*, 1996 and 1998, 74-201.

Statistics Canada, *Pension Plans in Canada*, 1998, 74-401.

Stoll, Hans and Robert Whaley, 1985, "The New Option Markets, in Anne E. Peck (ed.) *Futures Markets: Their Economic Role* (American Enterprise Institute for Public Policy Research).

Tobin, James, "Liquidity Preference as A Behaviour toward Risk," *Review of Economic Studies*, 25, 1958, 65-86.

Turner, John A. and Lorna M. Dailey (eds.), *Pension Policy: An International Perspective* (Washington: U.S. Department of Labour; 1990).

Webb, J. R., "Real Estate Investment Acquisition Rules for Life Insurance Companies and Pension Funds: A Survey," *AREUEA Journal*, 12(4),1984, 495–520.

Webb, James R. and J. H. Rubens, "How Much in Real Estate? A Surprising Answer," *Journal of Portfolio Management*, 1987, 10–14.

Webb, James R. and Jack Rubens, "Portfolio Considerations in the Valuation of Real Estate," *Journal of The American Real Estate & Urban Economics Association*, Fall 1986.

Wellman, Tony. "Examination of the Prospects for, and Potential Impacts of Real Estate Investment Trusts on the Multifamily Rental Market in Canada", CMHC External Research Project Report (6585-W052-1), January 1999.

Wurtzebach, Charles H., Glenn R. Mueller, and Donna Machi, "The Impact of Inflation and Vacancy on Real Estate Returns," *Journal of Real Estate Research*, 6(2), 1991, 153-168.

Visit our website at www.cmhc.ca