

The New Zealand VALUERS' JOURNAL

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NEW ZEALAND INSTITUTE OF VALUERS

Incorporated by Act of Parliament

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The New Zealand VALUERS' JOURNAL

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Contributions with a biographical note of the author should be typewritten and sent to the Editor, PO Box 27146, Wellington, who reserves the right to accept, decline or modify material. Views expressed by the editors and contributors are not necessarily endorsed by the New Zealand Institute of Valuers. Copies of manuscript should be retained by the author as they cannot be returned. Deadline: two months prior. Business letters, subscriptions and advice of changed address should be sent to the General Secretary. The mode of citation of this volume of *The New Zealand Valuers' Journal* is 1988 N.Z. Val. J. December 1988 (page).

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Editorial Changeover

I feel I may have just volunteered to step into the shafts of the rickshaw by offering to take up editorship of *The New Zealand Valuer's Journal*, and I fear an uphill pull in an unknown street.

However, Evan Gamby, the retiring editor assures me that the trip is a "breeze" and "nearly all" flat going. Evan should know as he has spent the last seven years as editor and has completed an excellent job. He has been instrumental in seeing the journal develop from a comparatively small "in-house" journal to a professionally produced and well respected publication for the New Zealand Institute of Valuers.

My task is considerably easier than the job done by Evan and his predecessors as editor, as I have only responsibility for a watching brief over production and not the "write it, paste it and print it" task editors had in the past.

Production is now in the hands of Tom Frewen and Vicki Jayne, operating as Wordsmith Partnership from Waiheke Island. From this idyllic location, they take the supplied copy and set up the journal on a computer desk-top publishing system. The finished artwork goes to Devon Colour Printers, who are located at Albany in Auckland.

I also have the assistance of the recently appointed Editorial Board who are responsible to Council for the implementation of general publication policy and form the link between myself as editor and the various professional areas and regional locations of the Institute membership.

The chairman of the Editorial Board is Alex Laing, vice-president of the Institute and a practicing rural valuer and director of a valuation company in Dunedin. Alex has a special interest in resource and mineral valuations and is also a chartered accountant. He covers all rural interests in the South Island for the Board.

The other members of the Board in alphabetical order are: Bill Burgess, who is the Northland Branch Councillor and is in private practice in Whangarei. Bill has a special interest in Maori land affairs and he covers all rural interests in the North Island for the Board.

Leonie Freeman has been employed in private practice in Christchurch for two years since completing a Masters of Commerce degree majoring in valuation and property management at Lincoln College although she has recently moved to employment in private practice in Auckland.

Even Gamby, the retiring editor, is a director of a valuation practice in Auckland and he specialises in commercial and industrial property analysis consultancy and valuation. Evan is a consultant to the Board as immediate past editor and provides liaison with Massey University.

Jon Gaskell is the District Valuer at Takapuna for Valuation New Zealand and he is a member of the Auckland Branch Committee. Jon covers government and local authority interests for the Board and provides liaison with Auckland University.

Rod Jefferies who is senior vice-president of the Institute, is the senior lecturer in property administration at Auckland University. He is also a consultant to his private valuation practice in Auckland and has a specialised interest in urban corporate valuations. Rod covers these interests for the Board.

Byron O'Keefe is a retired lawyer, an honorary member of New Zealand Institute of Valuers and is an author who has published legal texts including some on valuation matters. Byron is legal consultant to the Board.

Squire Speedy is a practising valuer in Auckland specialising in compensation valuations, and is an author who has published a number of text books on valuation and land related matters. Squire covers these specialist interests for the Board.

All Board members will be pleased to have contact with members of the Institute to encourage contributions to the *New Zealand Valuers' Journal* and your active participation will surely make my job as editor a whole lot easier. I look forward to communicating with you. *Trevor J Croot.*

Final Report On The 14th Pan Pacific Congress of Real Estate Appraisers, Valuers, & Counsellors

The final accounts for the 14th Pan Pacific Congress which was held on the 20 - 15 March 1988 were received by the Congress Chairman Co-ordinator on 16 September 1988.

An analysis of those accounts show that the Congress was attended by 357 full time delegates and 121 accompanying persons made up as under:

	Full Time	Accompanying
Australia	14	26
Japan	49	24
USA	28	25
Malaysia	2	1
Papua New Guinea	2	0
Singapore	2	1
Korea	14	0
Canada	5	5
New Zealand	214	39

\$325,003 inclusive of GST was received in delegates' and accompanying delegates' expenses after allowing for some refunds to registrants who did not attend.

On top of that amount, \$15,190 was received from casual attendees at the various functions throughout the week, \$220 from trade displays, \$940 from the sale of tapes and folders, and \$44,650.19 from sponsorship, student fees and sales of ties, scarfs, Pan Pacific papers etc.

A further \$849.08 was received from Convention Management Services as an ex-gratia payment representing interest on funds held by them up until final accounts were prepared.

As at current date, the excess of income over an expenditure in running this Congress is \$48,750.72 which was to be paid by the New Zealand Institute of Valuers, so the effective current surplus if the Congress Committee had not paid that fixed fee would be \$64,924.02.

There is still some expense to come off this excess of income and in particular a resolution has been passed by the Executive that monies could be spent on providing a final wind-up function in appreciation of the work of the Christchurch members in particular.

I believe that the surplus is a very successful conclusion to

an extremely successful Pan Pacific Congress and I believe that this Congress has gone a long way to restore the confidence of other Nations in the Pan Pacific Congress.

Some may think that the excess of income over expenses is excessive and has been achieved by over charging. I do not subscribe to that view. The effort put in by all who were associated with this Congress was exceptional and right up to a week or two before the Congress, it was difficult to state whether a profit or a loss would be made. In my opinion, a large part of the profit has been achieved by careful management, in particular the Committee only paid for meals that were consumed and not on a total head count basis, achieved savings by filling buses and then sending surplus buses back to the depot rather than allowing people to sit in buses willy nilly and utilise all the buses booked (on a sale and return basis) when only a few were required.

Taking care in this direction has achieved a large part of the surplus and at future Congresses these factor should be taken into account. Convention Management Services have proved a disappointment to the Congress Committee. I believe this was because of their main personnel in Christchurch but it was also exceptionally frustrating to have to wait until September to get final accounts.

This Congress was run for the first time on the basis of the participating branch providing most of the man power with only two members of the main Committee outside of Christchurch. The Rotorua Congress was run with a full Committee in Wellington and a full Committee in Rotorua. I believe the method of running the Congress adopted for Christchurch contributed to the smooth running, although it did place a great onus on the Christchurch Branch. In my opinion, future Congresses should be run with a similar Committee structure. It may well be argued that you do not even need membership from outside the organising branch, but I believe that one or two members outside that branch can help to bring another dimension to the organisation.
A L McAlister, Congress Chairman Co-ordinator.

Membership Applications

Intermediate Status

Belcher G E	Wellington
Bonne S.M.E.	Auckland
Bradford D.E.	Wellington
Burns G.A.	Auckland
Ching D	Auckland

Denford A. H.
Donovan J.M.
Ewing S.A.
Fallow E.B.
Frengley A.G.
Godfrey M.R.
Harris A.J.

Tauranga
Rotorua/Bay of Plenty
Central Districts
Southland
Wellington
Auckland
Auckland

Heer M.C. Otago
 Hopewell F. Auckland
 Jesnen M. I. Waikato
 Lan S. H. Wellington
 Lincoln G.N.P. Auckland
 Marshall D.G. Canterbury/Westland
 McCallum C.M. Southland
 Millen G.D. Waikato
 Morgan G.P. Canterbury/Westland
 Murchison H. W. Canterbury/Westland
 Owen A.R. Canterbury/Westland
 Parlane L. M. Auckland
 Pearce R.L. Wellington
 Saxton S.C. Northland
 Stockwell A.B. Auckland
 Tagaloa K.M. Auckland
 Todd P.D. Auckland
 Williams L.A. Canterbury/Westland
 Willis A.L. Taranaki
 Young R.A. Canterbury/Westland

Advancement to Associate Status

Barrett B.H. Auckland
 Brady G.J. Waikato
 Chapman A.G. Otago
 Edginton G.B. Auckland
 Haskell O.J. Waikato
 Havill MJ Waikato
 Hawthorne RC Waikato
 McGowan IR Auckland
 McKinley M.G. Hawkes Bay
 Paterson W.S.T. Hawkes Bay
 Perfect N. Waikato
 Pittar A.V. Auckland
 Puketapu H.J. Auckland
 Remmerswaal A.C. Wellington
 Sherlock B.P. Wellington
 Stone K. McK. Auckland
 Truebridge T.M. Wellington
 Walker D.J. Auckland
 Woolerton D.R. Waikato

Studentship

Field S. D. Central Districts
 Foord B.F. Auckland
 Howat W.G. Canterbury/Westland
 Larsen C. M. Central Districts
 McCulloch D.R. Canterbury/Westland
 McPherson A.B. Canterbury/Westland
 Price S.G. Central Districts
 Wong K.K. Auckland
 Wright K.R. Wellington
 Youthed M.S. Canterbury/Westland

Resignation

Carmichael A. L. Wellington
 Frizzell R. Rotorua/Bay of Plenty
 Gray A. Canterbury/Westland
 Morris G. W. Canterbury/Westland
 Shrimpton R.A. Waikato

Deceased (noted with regret)

Blaikie C.W.N. Nelson/Marlborough
 Hutchings A.B. Tauranga

Readmission as Associate

Lee Z. M. Overseas

Non-Financial Removal from roll

Were K.F.. Waikato

The following Valuers attained registration in 1988.

Anderson S.L. Otago
 Bennet J.H. South Canterbury
 Bibby D.J. Auckland
 Bilbrough N.R. Canterbury /Westland
 Blackmore R.F. Auckland
 Bond S.G. Wellington
 Brady G.J. Waikato
 Brown C.M. Auckland
 Campen S.N. Nelson/Marlborough
 Cawley A.K. Waikato
 Crean P.P. South Canterbury,
 De Malmanche J.P. Waikato
 Denize R.I. Central Districts
 Dick T.R. Otago
 Foster M.P. Canterbury /Westland
 Gadsby D.J. Central Districts
 Garland S.G. Northland
 Gregory GJ Gisborne
 Hawkey C.C. Central Districts
 Hewitt R.J. South Canterbury
 Jordan D.R. Canterbury /Westland
 Lamont M.B. Central Districts
 Lawson M.D. Wellington
 McLeod L.J. South Canterbury
 Milne R.H. Southland
 Morris K.G. Waikato
 Nicol R.F. Waikato
 Pawson K.D. Central Districts
 Peebles R. S. Canterbury /Westland
 Pope C.J. Central Districts
 Quirke M.A. Rotorua/Bay of Plenty
 Rainey S.J. Canterbury /Westland
 Reid W.J.M. Otago
 Remmerswaal A.C. Wellington
 Riepen V.A. Nelson/Marlborough
 Rowe B.A. Nelson /Marlborough
 Seymour W.R. Central Districts
 Sloan A.E. Auckland
 Smith M.G. Rotorua/Bay of Plenty
 Stiven C.J. Canterbury /Westland
 Tagaloa K.M. Auckland
 Tierney M.K. Auckland
 Veal M.J. Wellington
 Walshaw A.W. Central Districts
 Weaver C.J. Otago
 Wigmore A.M. Auckland
 Wills A.L. Taranaki
 Winter S.G. Southland
 Woodhouse S.O. Auckland
 Wright M.J. Canterbury /Westland

Valuers Registration Board Appointments

The Minister in charge of the Valuation Department, Peter Tapsell, has announced the appointment of three members to the Valuer's Registration Board.

The new appointees, Arthur Geoffrey Stewart, Donn James Armstrong and Robert Peter Young (the latter appointed on the recommendation of the New Zealand Institute of Valuers) will

hold office for a term of three years. The appointment which was announced in August this year, is effective from the 1st of May 1988.

Arthur Geoffrey Stewart

Donn James Armstrong

Robert Peter Young

Amendments to Trustee Act 1956 And Introduction of the Securities Act (Contributory Mortgage) Regulations 1988

Compiled by J.G. Gibson

Trustee Act 1956

From 1 October 1988, Subsection (1) of Section 10 of the Trustee Act 1956 has been deleted and substituted by Section 13N (1).

"13N Certain loans and investments by trustees not chargeable as breaches of trust

- (1) A trustee lending money on the security of any property on which the trustee can properly lend shall not be chargeable with breach of trust by reason only of the proportion borne by the amount of the loan to the value of the property at the time when the loan was made, if it appears to the Court

"(a) that in making the loan the trustee was acting upon a report as to the value of the property made by a person whom the trustee reasonably believed to be competent to value the property by reason of his or her profession or occupation and his or her personal expertise and experience, being a person instructed and employed independently of any owner of the property; and

"(b) that the amount of the loan does not exceed the proportion of the value of the property stated in the

report as the maximum proportion that the valuer considers that it would be prudent to lend on that property; and

"(c) that the loan was made on the advice of the valuer as expressed in the report.

- "(2) A trustee lending money on the security of any leasehold property shall not be chargeable with breach of trust only upon the ground that in making the loan the trustee dispensed either wholly or partly with the production or investigation of the lessor's title.

Sections 13B and 13C are included as follows:

"13B. Duty of trustee to invest prudently - subject to sections 13C and 13D of this Act, a trustee exercising any power of investment shall exercise the care, diligence, and skill that a prudent person of business would exercise in managing the affairs of others.

"13C. Duty of certain persons to exercise special skill subject to section 13D of this Act, where a trustee's profession, employment, or business is or includes acting as a trustee or investing money on behalf of others, the trustee, in exercising any power of investment, shall exercise the care, diligence, and skill that a prudent person engaged in that profession, employment, or busi-

ness would exercise in managing the affairs of others.

The Securities Act (Contributory Mortgage) Regulations 1988

These Regulations come into force on 1 January 1989. The following extracts from Interpretations and Sections should be noted.

Interpretation: *Capital Value* in relation to land has the same meaning as in the Valuation of Land Act 1951.

Government valuation in relation to any land, means the capital value of the land set forth in a district valuation roll in accordance with the Valuation of Land Act 1951.

Improvements has the same meaning as in the Valuation of Land Act 1951.

Modified Land Value means an amount equal to the land value of any land after deduction of the costs of removal or demolition of any buildings or improvements on the land.

Registered Valuer means a person who is a registered valuer within the meaning of the Valuers Act 1948.

Sections referring to valuations are as follows:

- 3 (b) The amount of the principal; sum secured, or to be secured, by the mortgage, or the aggregate amount of the principal sums secured or intended to be secured by the mortgage and any other mortgages ranking, or intended to rank, prior to or equally therewith, exceeds two-thirds of the modified land value of the land as set forth in a valuation report; and
- (c) the cost of subdividing or improving the land, or erecting or altering, or developing any buildings or other improvements on the land, as the case may be, exceeds five percent of the modified land value of the land as set forth in a valuation report.

Valuation report defined

For the purposes of these regulations "valuation report" means a written report relating to land that is, or is to be, charged as security for a contributory mortgage and which

- (a) Is prepared and signed by an independent registered valuer, and
- (b) Is dated as at a date not earlier than 4 months before the date of the contributory mortgage; and
- (c) Contains the information and other matters specified in the Third Schedule to these regulations.
- (2) For the purposes of subclause (1) of this regulation, a registered valuer is not an independent valuer if
- (a) That registered valuer and any broker who offers interests in the contributory mortgage to the public for subscription, or any mortgagor under the mortgage, are relatives, one being the spouse of the other or being the parent, brother, sister, or child of the other or of the spouse of the other; or
- (b) The registered valuer or any person employed by that registered valuer is, or has been within one year of the preparation of the valuation report,
- (i) A member or director of the broker or the broker's

nominee company or the mortgagor; or

- (ii) A member of a director of any company which is a holding company or a subsidiary of the broker or the broker's nominee company or the mortgagor or which is a partner or joint venturer with the broker or mortgagor; or
- (c) There is any other relationship or interest between the registered valuer and the broker or the broker's nominee company or the mortgagor that is likely to influence the judgement of the registered valuer.
33. Restrictions on creation of prior charges and discharges of nominee mortgages
- (1) Every broker shall ensure that no memorandum of priority or other document is executed enabling a prior or pari passu charge to be created in respect of land charged with a nominee mortgage without the written consent of all the contributors to that mortgage.
- 33 (c) In the case of a nominee mortgage which is a development mortgage, it is a condition of the mortgage that before a partial release of the mortgage is given the broker obtains a written valuation report prepared and signed by a registered valuer which states that, in the opinion of the valuer, the value of the balance of the land or interest in land after the partial release provides adequate security for the principal sum secured by the mortgage; and..

Third Schedule

Information and Other Matters to be Contained in Valuation Report

1. The name and address of the registered valuer and brief description of that valuer's qualifications.
2. A statement that the valuation report is made by the registered valuer as an independent registered valuer within the meaning of regulation 5 of these regulations.
3. The situation, description, and area of the land that is, or is to be charged as security for the contributory mortgage.
4. A list of any encumbrances appearing on the certificate of title for the land as at the date of the valuation report and, if the registered valuer has been instructed by the broker or the mortgagor that any of the encumbrances are to be discharged before registration of the contributory mortgage, a statement to that effect.
5. The land value and the capital value of the land as shown on the most recent government valuation of the land and the date of that valuation.
6. The present use of the land and, if known to the registered valuer, the proposed use of the land.
7. The opinion of the registered valuer as to the land value of the land free of encumbrances.
8. The nature and value of any improvements situated on the land.
9. The opinion of the registered valuer as to the capital value of the land free of encumbrances.
10. In the case of a development mortgage
 - (a) The opinion of the registered valuer as to the modified land value of the land; and
 - (b) A description of the development and the opinion of the registered valuer as to the capital value of the land free of encumbrances after completion of the development.

11. The basis upon which the valuation is made and any assumptions used in making the valuation.
12. If the land is, or to the knowledge of the registered valuer is proposed to be, used for the purpose of producing income, a statement by the registered valuer as to the amount of income that the land can be reasonably expected to produce on an annual basis under conditions prevailing at the time that the report is made.
13. The registered valuer's recommendation as to the amount for which the land provides adequate security for a loan on first mortgage free of encumbrances.
14. If the registered valuer has been instructed that the land is to remain, or become, subject to any encumbrances which will rank in priority to or part passu with, the contributory mortgage, a statement to that effect, particulars of those encumbrances, and the registered valuer's recommendation as to the amount for which the land subject to those encumbrances provides, or would provide, adequate security for a loan on mortgage ranking part passu with, or subject to, them, as the case may be.
15. A statement by the registered valuer that:
 - (a) The valuation has been prepared for use by intending lenders; and
 - (b) The registered valuer has consented to the distribution of the report to intending lenders and that, as at the date of the report, the registered valuer has not withdrawn that consent.
16. The date as at which the report is prepared.

Fourth Schedule

- (2) The aggregate of the principal sums advanced under and secured by the mortgage and the amount of all charges ranking ahead or equally therewith shall not exceed (state proportion not exceeding two-thirds) of the capital value of the land subject to the mortgage as stated in a valuation report within the meaning of those regulations and the loan shall be made in accordance with the recommendation of the registered valuer expressed in that report:

Eleventh schedule

Information and Other Matters To Be Contained in Document to be Given to Contributor in Respect of Development Mortgage

Massey University Agricultural Engineering department

Building Technology 1

The degree subject "Building Technology 1" has been specifically written for Valuers (and Property Managers) by Massey University staff. 1988 was the first year it has been offered extramurally and it will again be available in 1989.

Topics include:
 Surveying
 Building Materials
 Age of Houses
 Building Services

Emphasis has been laid on topics of special relevance to Valuers, e.g. life of exterior materials. A compulsory vacation course from the 22-26 May includes surveying labs. (A new lab in 1989 will require the identification of building materials) tutorials, and the inevitable test. How to start enrolling.

Enrolling for the first term:

Previously enrolled but no course taken in 1988:

Enrolled in 1988:

General

The whole enrolment process must be completed by 31 January, 1989, so act now. Ensure you include your current address. The address to write to is:

Enrolment office (Extramural),
 Massey University, Palmerston North.

Ask for the "Extramural Pre-Enrolment Package

Write for the card (yellow) "Request for Enrolment Pack, Extramural roll" or phone (063) 69099/Enrolment Office

You will automatically receive a card for you to return if you wish to enrol in 1989.

24. A copy of a valuation report within the meaning or regulation 5 of these regulations containing the information and other matters specified in the Third Schedule to these regulations.

Twelfth Schedule

Information and Other Matters To Be Contained in Document To Be Given To Contributor in Respect of Mortgage Other Than Development Mortgage

22. A copy of a valuation report within the meaning of regulation 5 of these regulations containing the information and other matters specified in the Third Schedule to these regulations.

Explanatory Note

This note is not part of the regulations, but is intended to indicate their general effect.

These regulations come into force on 1 January 1989. They relate to the offering of interests in contributory mortgages to the public and the management of those mortgages. The principal elements of the regulations are as follows:

- (a) They prohibit the offering of interests in contributory mortgages to the public and the management of interests in such mortgages by any person unless that person is registered as a broker under the regulations and prescribe requirements for registration:
- (b) They regulate the receipt and disbursement by brokers of contributions by investors and other money:
- (c) They prescribe duties and obligations of brokers and requirements relating to the auditing of broker's records and accounts.

The regulations provide for applications for registration as a broker to be made under the regulations on or after 1 November 1988 as if the regulations had come into force on that date and for the registration of applicants as brokers with effect from 1 January 1989, the commencement date of the regulations.

I

SQUIRE SPEEDY PRIZE IN PROPERTY ADMINISTRATION.

The University of Auckland has announced that the Squire Speedy Prize in Property Administration for 1987 was awarded to Miss Janet Gillespie of Auckland

Report on The October Council Meeting 1988

The mid-year meeting of the Council of the New Zealand Institute of Valuers was held in the conference room at the Quality Inn, Willis Street, Wellington on Sunday and Monday 9-10 October 1988.

The President, Mr R. E. Hallinan, welcomed all Councillors in attendance and invited guests. Apologies were received from Mr G Horsley who was overseas and Mr G Foster who was substituted by Mr J Shand.

Committee Reports Received and Discussed:

Publicity and Public Relations

The appointment of a public relations consultant to the Institute was discussed and the Consultus organisation was appointed. The design and possible production of Institute neckties for the 50th Anniversary was discussed.

Education Board

The advantages of holding regular Distance Teaching Seminars particularly for topical issues was discussed. Concern was expressed at the lack of funding for textbooks for students.

Statistical Bureau

A revised system of charging for electronic sales data is to be introduced resulting in overall increases of approximately 10% but with a sliding scale that will not unduly penalise subscribers in the large metropolitan areas.

The Statistical Bulletin was confirmed as a very valuable reference publication but it was emphasised that a greater input is required from branches.

A Valuers' Handbook will be considered under the services review.

The difficulties caused by Goods and Services Tax in sales data was discussed and a sub-committee was appointed to prepare a submission for government to have all property zero rated for GST purposes.

A sub-committee was appointed to consider grouping all the trading activities of the Institute into a single services division.

Professional Practices Committee

A sub-committee was set up to establish guidelines within which councillors may take a more active role in answering questions from the public in their district.

Editorial Board

The appointment of Trevor Croot as policy editor was announced. The retiring editor, Evan Gamby, reported that the new publishing system involving the policy editor, production editor and printer was working satisfactorily.

A vote of thanks was passed with acclamation for the work done by Evan over the past seven years as editor of the Valuers' Journal.

Council of Land Related Professions (CLRP)

The unification working party is proceeding with a study on the benefits of combining land related professions.

Asset Valuation Standards

Standards have been reprinted and distributed.

Pan Pacific Congress

The final report of the Pan Pacific Congress committee was presented by Mr A L McAlister and a very satisfactory profit was recorded most of which is to be invested as a fund for future Pan Pacific Conferences.

Land Professionals Mutual Society (LPMS)

Mr A L McAlister reported on another successful year for LPMS and advised that lower premiums on a rating basis should be achieved this year as a result of the insurance market being very competitive.

Westbrook Properties

The conversion of the shareholding in Westbrook House into Unit Title ownership is proceeding.

NZIV Services Limited

Mr E T Fitzgerald reported on the satisfactory operation of the company and the good progress being made with sales of electronic data systems.

Corporate Plan

A wide range of matters relative to the Corporate Plan are being considered and actioned. A proposal for a position of Deputy Counsellor in each branch is to be discussed by councillors with their respective branches and submissions on the proposal will be invited to be received by 7 March 1989. A discussion paper on amendments to complaints procedures was received and forwarded to Executive for consideration. A distance conference seminar for branch secretaries is to be conducted by the General Secretary in March 1989.

Annual Budget.

The budget for the 1989 year was approved showing a provisional deficit of about \$18000.

Subscriptions for the year were set at:

Registered Valuers	\$250.00
Non-Registered Valuers	\$150.00
Overseas Members	\$150.00
Affiliate Members	\$150.00
Life/Honorary/Retired 14(2)	Nil
Retired 14(1)	\$20.00
Students	\$20.00
Advancement/Entry Fees	\$30.00

A withdrawal of funds invested with Leadenhall Investments has been requested.

Valuers Registration Board.

The Minister has announced the appointment of Mr Arthur Stewart as his representative on the VRB. Mr Peter Young has been re-appointed to represent NZIV. Council noted the contribution of Mr M R Hanna to the VRB over a long period of years.

Legislation

The working party on the Valuers Act Bill has been reconvened. It is generally considered that the Government has considerably reviewed its position with "Occupational Licensing" and less changes are likely to occur.

The Institute has made submissions on legislative matters during the year:

- Two submissions to working groups on occupation regulation
- Submission by Mr A Hearn on the Town and Country Planning Act.
- Submission on the Rating Powers Bill

- Submission on the Review of the Earthquake & War Damage Act
- Submission on the Sale of Liquor Bill.
- Submissions through branch responses on the Review of Resource Management Law Reform.

A report on the CER Trade in Services conference held in Auckland on 6 & 7 September 1988 was presented by Mr R L Jefferies in which particular reference was made to the impact of reciprocity with AIVLA and the possible need to ensure that any changes to the Valuers Act will comply with Australian requirements.

Financial Assistance to Universities

Applications for the Professional Chairs at Massey University and Lincoln College are being processed with short list selections having been made. A registered valuer is to be appointed as an additional senior lecturer.

Reciprocity with Other Institutes

Further information has been requested on registration qualifications for Canada and further details are sought for the comparability of Australian registration qualifications. Discussions are continuing with RICS in Great Britain. NZIV President, R E Hallinan attended the AI V Annual General Meeting 14-20 May 1988 and was awarded honorary membership of the AIV.

Branch Remits

The procedure for submitting branch remits as contained in the

rules was confirmed.

Jubilee Celebrations

A history of the first fifty years of the Institute is being written by Mr S W Ralston with the costs being met by Council and a copy of the publication will be distributed to members.

A Jubilee Seminar and Annual General Meeting will be held in Wellington from Monday 10 April 1989. The seminar will proceed for one-and-a-half days and will include a banquet, a breakfast session, and recreational activities.

A static display stand will be circulated around the country and will be available for one week to each branch to display in a prominent place.

Branches will be required to organise their own local functions and the President will co-ordinate the branch visits to coincide with the dates at each branch.

Working Party on Plant and Machinery Valuers

A report from the working party is to be circulated to all branches for consideration and submissions will be invited and received up to 7 March 1989.

If the proposals are favourably accepted, Council will promote a change to Rule 15 to provide for admission of suitably qualified plant and machinery valuers as intermediate members.

Overseas Members

Executive is to consider appointing a Councillor to be representative of overseas members. *Editor.*

World Valuation Congress 111 Update

The theme for the third World Valuation Congress being held in Singapore next April is Appraisal of Current Valuation Practice. Principal issues include valuation of resort and hotel properties, public sector valuations, the effect of Mass Rapid Transit on real estate values and professional negligence/indemnity.

In response to suggestions from participants of the previous Congresses in Cambridge and Vancouver, this programme will incorporate a field trip of properties related to the issues for discussion. Senior Managers will be present to describe and lead discussions.

The general scheme is for two papers in each main subject area to be presented by speakers from different countries. The papers will be followed by discussion in small groups with reports to a plenary session.

In addition, each delegate is invited to submit "special topics" for scheduled discussion periods. Those with a common interest will be set up in discussion groups each day.

All sessions will take place at the National University of Singapore and accommodation has been reserved at a local hotel. The Congress fee is inclusive of accommodation and most meals. To ensure a high level of input, a maximum number of 140 delegates will be registered for the Congress and applications will be considered on a selective basis. The fee for a spouse accompanying a delegate is US\$150 and a social programme has been organised for these guests. Programme details are outlined below. Applications for registration should be made on the form that appears on the bottom of the following page and sent together with a cheque made payable to the National University of Singapore.

PROGRAMME

Joint Chairman
Phillip H. White, MSc CA (Hons) BC, FRICS Lim Lan Yuan, MBA, BSc (Est Man), BSc (Econs) LLB (Hons), FRICS, FSISV, ACTS.

SUNDAY 23 APRIL 1989
Registration
Evening: Welcoming reception

MONDAY 24 APRIL 1989
Morning: Valuation of Resort Properties Carl Schultz, American Appraisal Institute
Valuation of Hotels W. Martin Hattersley City University (London)
Afternoon: Workshops on special topics, Tour of School of Building and Estate Management Facilities
Evening: Dinner hosted by NUS

TUESDAY 25 APRIL 1989
Morning: Effects of MRT Systems on Land Values R. G. Williams, Vigers Hong Kong Public Sector Valuations Lim Lan Yuan, National University of Singapore
Afternoon: Workshops on special topics. Presentation of research work by School of Building and Estate Management
Evening: Dinner hosted by SISV

WEDNESDAY 26 APRIL 1989
Field Trip (whole day)

THURSDAY 27 APRIL 1989
Morning: Professional Negligence and Indemnity. William D North, National Association of Realtors, USA
Peter J. Mahoney, New Zealand
Afternoon: Plenary sessions.

V

APPRAISAL REPORT WRITING
AND PREPARATION

Romain L Klaasen FRI, AACI, APA

Reviewed by Everard G Moorhead

Senior Lecturer in Valuation, Lincoln College

Subtitled *A Comprehensive Self Study or Correspondence Course by a Practitioner*

Price: Canadian \$66 (second Edition)

From: Cardsen Publishing Co

c/o 1061 Joan Crescent

Victoria, B.C. Canada. V8S 3L3

Further details available from the publisher or author.

The text is divided into 7 "phases" as follows:

- Phase 1: Beginnings
Speaking versus writing. Measuring clarity. The letter of transmittal.
- Phase 2: Credibility and Readability
Strive to be read: 16 rules to improve readability.
- Phase 3: Content and Format
What information to present, and how to present it in demonstrative reports, narrative (fee) reports, updates, and letters of opinion.
- Phase 4: Specific Function Assignments
What to present and emphasise in assignments with a mortgage financing or expropriation function.
- Phase 5: Narrative Descriptions
The organisation and changing emphasis in city-region, location, and property descriptions.
- Phase 6: Presentations, Analyses, and Conclusions
Highest and best use, data presentations and analyses, conclusions/reconciliations.
- Phase 7: Report Preparation
Typing, splitting words, illustrating, organising, proof reading, binding.

If ever there was a profession that needs concise, unambiguous and clear writing, it is ours. I offer the following comments about report writing in general and Romain's text in

WORLD VALUATION CONGRESS

To: Organising Secretary, WVC 111 School of Building and Estate Management Faculty of Architecture and Building National University of Singapore 10 Kent Ridge Crescent. Singapore 0511

I wish to attend World Valuation Congress 111 and would prefer single! double accommodation.*
(will/will not* bring a guest.*

I enclose herewith my Congress registration fee, inclusive of 1 accommodation and most meals, for US\$400 single delegate/US\$550 delegate with guest* made payable to the National University of Singapore. A charge of US\$25 will be imposed for late registration e.g. after Feb 1 1989.

In the event of the Congress being oversubscribed, the Organisers reserve the right to refund registration fees in appropriate cases.

*Delete as appropriate

particular, through my perspective as an educator.

Frankly, I do not know how to teach a student to write a good report. True, I can enhance a student effort by encouraging order and cohesion. I can show him/her the form it should take, the content it should have, the depth it should have, and some general comments on presentation.

But the credibility and readability described in Phase 2 of the text is an area where a student's learning really begins at school. A good command of the language and familiarity with grammar and syntax are, sadly, not always displayed at a satisfactory level of competence these days.

Whether this observation is caused by age, or comes with age, or is even confined to certain age groups, the fact is that our written words do not always flow, do not provide the readability and by inference, the credibility that they should. Practice can make better, but without a good basic understanding of our language, it restricts perfection to the "difficult to achieve" category.

My experience with students has been that encouragement to adequately prepare, to be precise and to re-write reports (to take the time and effort) has resulted in a much better finished product. No amount of texts will change that.

Where I believe this text does shine is in its use as a start point in the construction of a written report. Whether this is in the letter of transmittal, or the content/format or the emphasis in specific assignments, I found this a useful reference or start point with concise common sense reinforcing the objective of each part.

Where Clause 17A of our code of Ethics is very brief (recommended minimum content of a written valuation report) at the other end of the spectrum, this text may not appeal to your average practitioner.

However, to a student looking to learn the skills of report writing, and to pick up better grades in the process, this is a book that I would recommend, although New Zealand examples would be preferred.

My one negative comment is that this book is a tad long, possibly reflecting the different emphasis given reports in North America.

In any event, we all know a good job when we see one, and Romain's effort is a positive and very constructive means of achieving higher standards of appraisal report writing and preparation.

Forename Surname..... 1

Degree and qualifications.....

Company or office.....

City.....

Country Postcode.....

Telephone number.....

I would like to take part in discussions on the following topics:

Signed..... Date.....

A New Approach To The Feasibility Analysis Of Commercial Property Investments

By Leonie M Freeman

The following articles are the second and final in a series of which are based on the thesis submitted as part requirements for a Masters of Commerce majoring in valuation and Property Management at Lincoln College in April 1987.

Market Analysis For Central Commercial Office Space in Christchurch

Upon the commencement of the period for this Master's study, Christchurch was experiencing an unprecedented building boom, not experienced to the same degree or intensity in the city's history. The question which was posed from a variety of people was what is the likely future demand for office accommodation in the city and will this demand be sufficient to fill all the space currently being constructed.

The question posed-was what is the likely future demand for office accommodation

It was because of these and similar type questions that a preliminary study was undertaken in an attempt to provide some answers to the question of supply and demand.

Market analysis is also critical when evaluating the investment and development process. A comprehensive market analysis study incorporates a variety of factors. These include the analysis of both direct and indirect forces such as social, political, environmental and other regulatory influences applicable to the project, along with direct forces of supply and demand, and the strength of the underlying elements of each.

Demand for office space arises predominantly from four sources including: existing tenants, new businesses, tenants relocating from other cities and tenants expanding or upgrading their space requirements. Important determinants include: location, standard or accommodation, rental levels, situation with respect to transport, availability of a labour market and location of allied industries, competitors, banks and financial institutions.

A survey undertaken by the Auckland City Council Data and Policy Team 1986 questioned the main and secondary reasons for tenants choosing newly constructed premises. Table 2.1 illustrates the most significant reasons mentioned (the first

Table 2.1

Main Reasons for Tenants Choosing Newly Constructed Premises

Available at the right time	29%	(35%)
Location relative to physical features e.g. motorway, carpark	13%	(9%)
Location relative to associated company	11%	(13%)
Floor size/design/layout	10%	(7%)
Prestige Location	9%	(10%)
Availability of reserved parking or parking building nearby	8%	(16%)

Leonie Freeman. M. Com. (VPM) Hons has a special interest in property investment analysis and development of computer software for valuation and associated property practices. In her thesis, Leonie focussed on the various steps involved in the real estate investment procedure and introduced some new

concepts to aid feasibility analyses of commercial property investment. The following articles are the second and third in a series of three which are based on the thesis submitted as part requirements for a Masters of Commerce majoring in valuation and Property Management at Lincoln College in April 1987.

The secondary reasons for choice of premises differed significantly from the main reasons (Table 2.2).

Table 2.2

Secondary Reasons For Tenants Choosing Newly Constructed Premises

Floor size/design/layout	23%	(22%)
Building Image	21%	(12%)
Available at right time	18%	(15%)
Availability of parking/parking building	15%	(9%)
Location relative to physical feature	14%	(14%)
Cheap rental	12%	(6%)
Good views	10%	(8%)
Prestige location	8%	(14%)

Again, the first figure is the percentage of all respondents mentioning it, the second weights the responses by floor area:

Referring to the above, it is interesting to note that the priority of the right timing is critical to tenant choice. By comparison, prestige location ranks somewhat lower in the scenario and certainly is of less relevance to the majority of tenants than factors such as floor size/design/layout and building image.

The following investigation focused solely on the supply and demand for commercial office space in Christchurch, and was divided into three main sections.

1. Office supply levels – an assessment of the historic and projected office supply levels for the central city office space market was conducted.

2. Employment Ratio Analysis - where the potential demand for new office space using employment statistics as the base ratio is estimated by determining the number of occupied square metres of office space per employee for the metropolitan region. The amount of new office space potentially required is then estimated for each city on the basis of employment growth prospects.
3. Econometric Analysis-this involved building a model concentrating on pertinent statistical data relating to the commercial floor space market in Christchurch, thereby identifying factors which affect the supply and demand for office space.

Office Supply Levels

Supply figures for the Christchurch commercial office space market were derived from a number of sources. The Town Planning Division of the Christchurch City Council has collated data on the growth of floor space in Central Commercial zones. Figures and associated graphs for total gross central commercial floorspace growth were available since 1966 based on data of building permit issue.

An analysis of nett future office space levels based on building competition date has been carried out by W E Simes and Company - Commercial Division. This commenced in November 1985 with subsequent amendments undertaken periodically since then. The information used in these articles was based on an update of the statistics as at March 1988.

Some adjustment was required to the figures with the end result being a summary of nett office space completed and projected based on completion dates. Figure 2.1 (above right) graphically illustrates the result. The necessity for this adjustment however, has tended to illustrate the lack of relevant statistics available and the difficulty in obtaining adequate data upon which further work can be undertaken.

Employment Ratio Analysis

Potential demand for the Christchurch region was assessed using tertiary employment statistics obtained from the Canterbury United Council. This being the combination of the trade, retail and hotels, transport and communication, finance, insurance and real estate employment group. The office space per employee relationship was firstly analysed using historical data. Secondly the projected employment growth was multiplied by this coefficient to arrive at the projected rented office space required. Alternatively, the amount of new jobs that would be required to fill the office space currently being constructed can be estimated.

Details of this analysis are illustrated in Table 2.3.

TABLE 2.3 ASSESSING POTENTIAL DEMAND USING TERTIARY EMPLOYMENT STATISTICS FOR THE CHRISTCHURCH REGION

Year	Office Area M ²	Tertiary Emplmt figures	M per employee	Emplmt Proj'n cautious	Emplmt change P.A.	Est DD P.A (Ma) @18m	Empl Proj. optimistic /empl.	Empl change P.A.	EstDD P.A (Me) @18m./empl.	How many new jobs are required to fill the office space @18mz/empl
1981	892283	486449	18.34							
1982	899524	49874	18.04							
1983	901779	48932	18.43							
1984	908684	49708	18.28							
1985	920072	52040	17.68							
1986	931638	55479	16.79							
1987	962691	55020	17.50	55020			55020			
1988	1010980			56164	1144	20592	56340	1320	23760	2683
1989	1070316			57405	1241	22338	57709	1369		3296
				58495	1090	19620	59030	132	7	
									32 87	

COMPLETE & FUTURE OFFICE SUPPLY LEVELS Source: W.E. Simes & Co.

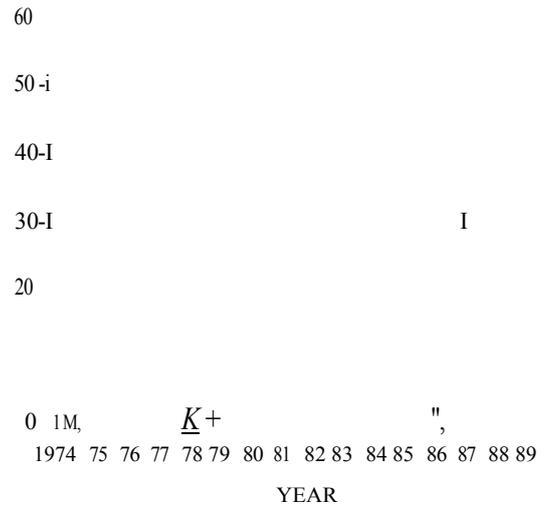


Figure 2.1

The table indicates that with the two employment growth scenarios the estimated demand for office space in the next few years is approximately 20,000 25,000 square metres of space per annum. This is somewhat below current figures estimated for completion during this period.

An alternative way of considering this analysis is to calculate, based on the projected office space due for completion, the number of new jobs required to fill all available space. The figure of 18 square metres per employee adopted, is based on office areas divided by employment figures, which have been historically analysed.

Further allowances could be made for vacancy rates and for tenants upgrading from their present level of accommodation. These would thus deal with the major areas of demand.

Another factor to consider is the basis of the supply projections. The historic statistics analysed were based on nett changes each year, that is office space completed less office space demolished. However, the projected supply levels include only new completed space and no account of potential office space demolition is made.

Therefore these factors would tend to suggest that potential demand for office space would be greater than that assessed, by the degree of upgrading, and that projected nett supply levels would be less than those estimates by the amount of office space demolished in each year.

Further detail and perhaps improved results could be achieved by further stratification of the supply information. Such considerations as location, building type and standard, rental levels are

other factors which could be dealt with. For example, we consider good quality buildings in prime locations are likely to experience little difficulty in leasing as opposed to poorer located buildings, which may experience significantly more, take a longer period to lease or have to reduce rents to provide an incentive for prospective tenants.

There are two areas of data which would be beneficial to have available and would subsequently improve the accuracy of the estimates. These are the percentage of firms upgrading to higher quality accommodation, and the projected amount of office space to be demolished in the next few years. Further survey work undertaken over a period of time is required to derive this information. Time and capital constraints have not permitted such an exercise to be undertaken within the realms of this study.

Other areas which require further investigation and that could be continued from this study, is a continuous detailed monitoring of supply figures, areas, and types of buildings demolished and endeavouring to located more recent and accurate employment statistics and projections. There are alternative types of base ratios which can also be considered such as economic indicators, coefficient per capita and ratios of gross domestic product. The gathering and analysis of such data would allow further comparison, monitoring and improvement on this segment of the research work.

There appears to be an increasing demand by potential investors for more sophisticated market analysis work.

There appears to be an increasing demand by potential investors for more sophisticated market analysis work. As the number of developments currently under construction or potentially being considered increases, and uncertainty of future tenanting exists, the possession of accurate projected supply figures and potential demand estimates are increasingly more valuable.

Econometric Analysis

An econometric analysis is designed to determine how and what factors affect a dependent variable. In this study the dependent variable was demand for office space and the objective was to identify what factors influence and impact on this in an historical context. Such a model after further monitoring could provide indications as to the likely demand for space in the future.

The dependent variable for the model is total floor space within the Christchurch Central City Commercial Market. This data was derived from the Christchurch City Council and are the same statistics that were used earlier within this study. There are no available historic indicators of demand, or past vacancy levels for office space. However, for the purposes of this study, the assumption that demand equals supply has been made. Previous analysis indicated the current vacancy rate was shown to be negligible at 1% and therefore consider the adoption of this approach to be appropriate.

The following variables were considered when determining the model: share price index, mortgage interest rate, average real net profits - property investors, average real total assets ,

property investors, and average weekly earnings. Two dummy variables were included to reflect (1) periods when rent freezes were imposed and (2) cater for the repercussions of the oil shocks in the early/ mid 1970's period.

The model specified after undertaking tests to determine its validity is as follows:

$$\text{Total Demand} = 423590 + 3.95 (\text{Share Price Index}) + 14866 (\text{Mortgage Interest Rate}) + 20516 (\text{Average Weekly Earnings})$$

(8.50)*** (0.874) (6.45)***

$$\text{Interest Rate} = 464.9 (\text{Average Weekly Earnings}) - 20516 (01)$$

(7.53)*** (1.99)-

R ₂	0.976
R ²	0.970
F	162.143
N	21

Coefficient statistically significant at 10% t₂₁₋₅=1.746

Coefficient statistically significant at 5% t₂₁₋₅=2.120

Coefficient statistically significant at 1% t₂₁₋₅=2.921

The model appears to meet all the statistical requirements and shows an adequate ability to predict demand from out of sample data. However, based on a priori expectations and knowledge of the marketplace, this model appears too simplistic, and it rejected some variables one would expect to be relevant such as property investors net profits. Part of the reason for this could be attributed to the out dated statistics, and that they were recorded and presented on a national basis. Regional figures specific to Christchurch were difficult to obtain, and if gathered, problems of accuracy and the small date range outweighed their usefulness.

The statistical database is the key to any further work on similar types of models.

The statistical data base is the key to any further work on similar types of models. Recent profitability, economic and trend data specific to the Christchurch region is required. The model illustrated above has not been altered since the original analysis was undertaken in January 1987. This was primarily because of the difficulties in accessing and adjusting the original model. It does however, provide an indication and illustration as to a possible approach into dealing with such questions.

In my opinion, such an approach as this is likely to provide the best method of predicting and estimating what the demand for space is likely to be. It would provide general trends of a particular market place, such as Christchurch if appropriate statistic specific to the area could be obtained. Up to date and accurate data is required to develop the initial model and testing to ensure all the statistical requirements are satisfied. Subsequent to this continued monitoring over a period of time is then needed to determine the accuracy and the model forecasting ability.

However, this model has provided a base from which further work can be undertaken. The basic statistics have been collected and the suggestion is now the development of an index specific to the property industry. A more detailed model would be required and a variety of accurate and relevant statistics needed.

There is at present no known available property index in New Zealand, and any further work undertaken in the area would prove extremely useful and beneficial.

Summary

The survey of commercial property investors indicated that little market analysis was undertaken. However, there appears to be increasing awareness of the need for such information. The assessment of potential demand for office space is difficult to

measure accurately and time is required to instigate the necessary data collection and monitor the results. It is however, a critical area for potential investors. The above study is a preliminary investigation to this problem and emphasises the areas of information required. All this requires time and capital to initiate, but it is clear that the requirements of investors for accurate and relevant market information would make this worthwhile.

THE THIRD ARTICLE

Financial Analysis The Development of a Linear Programming Model

The financial feasibility of a potential development is the third and perhaps most important factor in the investment procedure. In the following section, the application of linear programming as an alternative method of analysing and quantifying commercial investments, is examined.

Linear programming is a technique that can be used when the objective of the problem is to optimally allocate limited resources. It is a general methodology that can be applied to a wide range of problems with the following characteristics:

1. A wide range of activities are possible such as development options, leasing or selling, and financing options.
2. Various constraints prevent free selection from the range of activities such as capital availability, and floor space.
3. There is an objective, such as profit maximisation, which can be quantified.

This programming technique was originally developed during the 1940s and since then has been used in business, commercial and farm planning problems. Very little work has been done on its potential application to real estate investment decisions although these decisions meet all the above characteristics.

The real estate investor's problem requires the allocation of scarce resources (such as land, equity and mortgage finance) to various development alternatives (such as the number of floors in an office block, with air conditioning and basement options). The sensitivity of the optimal solution to changes in key variables was then analysed.

Model Development:

The model was initially developed utilising some data based on a building completed approximately three years ago. This involved a ground floor carpark and six floors of office space above, financed totally with equity funds. As one of the major advantages of linear programming is the maximisation of an objective from a range of possibilities, and to illustrate the use of this technique in the real estate investment field, a number of additional activities were included. These were: a variety of development alternatives, the option of mortgage finance, the incidence of taxation, and the option of selling or leasing the building in specified periods.

Subsequent to the initial formulation, the impact of changes in capital availability, interest rates, rental growth, building costs, holding period policy and the individual investor's discount rate, or required rate of return were analysed.

The basic model was therefore developed to illustrate this modelling technique. Note that some of the factors such as development options, holding period, and financing were assumed for the purposes of this illustration and can be altered to suit specific investor's objectives.

In the first period, the land is purchased, and a maximum of

7 floors with options for air conditioning and a basement carpark can be constructed. The total construction period is 2 years. The building is subsequently leased with options to sell or lease in years 10-16.

The lease is for a term of 16 years, with two-yearly rent reviews. Tenants are liable for all outgoings such as rates, insurance and cleaning with the landlord responsible for external maintenance, redecoration of common areas, and land tax. The rental is payable monthly in advance.

The rentals adopted for the first two periods were actual market levels achieved in this particular building. After this an annual rental growth rate of 15% per annum compounding was applied over the investment period. Our research has indicated this to be an appropriate level. All the rental income figures are net figures, that is with an allowance for management fees (6% of gross income), vacancies (2.5% of gross income) and external maintenance (2.5% of gross income) deducted.

The estimated sale price or market value of individual floors has been calculated for years 10-16. This has been determined by capitalising the net annual market rental by an appropriate market capitalisation rate. The rate used in this example is 8%. The maximum holding period was specified to be 16 years.

Capital is obtained from two sources throughout the construction period, a maximum equity contribution of five million and mortgage finance which comprises a maximum first mortgage of \$3,000,000 (interest rate= 18%) and a maximum second mortgage of \$2,000,000 (interest rate=20%). The mortgage money is borrowed during the construction phase and incurs interest charges for each subsequent year until the principal is repaid.

There is also a flexible overdraft facility throughout the total investment period to enable any cash deficit to be met. This carries a maximum limit of \$2,000,000 at an interest rate of 20%. Interest payments are a tax deductible item as opposed to the principal repayment which must be made from post-tax cash surpluses.

This particular model was set up to enable the construction of the computer model to be most flexible. It could, however, now be programmed in various ways to produce commercially acceptable minimum limits for equity contributions as required alternatives.

The net cash surplus or profit each year is taxed at 48%. This is paid in the subsequent year. The annual allowance for depre-

ciation is calculated at a flat percentage (1%) of the historical cost of the building. This allowance remains constant over the operating period unless improvements are made to the structure of the property. If the option of air conditioning is included, the associated depreciation allowance is 20% of diminishing value. The tax savings due to depreciation are treated as additional after-tax income received at the end of the year.

The post-tax surplus is discounted in each period at the investor's post-tax required rate of return, also known as the hurdle rate. The post-tax discount rate adopted in the model is 18%. All cash flows are discounted to present value using this required rate of return (i.e. 18%)

One advantage of such a modelling technique is its flexibility

One advantage of such a modelling technique is its flexibility. Outlined above is one set of assumptions adopted. However, alterations can be made. For instance over the development period the cash flow could be monthly with the leasing and selling periods being annual. The time scale adopted can also be altered to suit specific investor requirements. A developer may wish to develop and sell immediately as opposed to those whose objective is to hold long term.

Results

Modelling the above assumptions for this particular development establishes the standard against which other runs, representing changes in certain key factors, can be compared. This is referred to as the base run.

The total net present value of the optimal investment is \$1,021,553. the internal rate of return associated with this base run solution is approximately 29%.

The optimal solution of the base run was a basement carpark with 7 floors of air conditioned office space above. Note that the cost of constructing the basement would only have to increase by a further \$39.30 per square metre (\$30,031 per floor) for the option of a ground floor carpark and office accommodation above to be more profitable.

The inclusion of air conditioning in the initial development was another factor which was subject to change with increases in cost. The purchase and installation price of \$130 per square metre (\$99,290 per floor in year 1) required an increase of approximately 2.5% (\$3.36 per square metre) before air conditioning was excluded from the optimal solution.

The building is subsequently leased in years 3 through 15 and is sold in the final period year 16.

Finance is obtained from a combination of equity and mortgage funds.

The gearing level (i.e. loan finance in relation to total cost) is approximately 81% with \$834,522 of equity finance, \$3,000,000 first mortgage and \$1,036,263 second mortgage finance. The total available overdraft of two million dollars is used during years 3-10.

The total development was leased from year 3 through 16, with all floors being sold in the final period year 16. All of the principal owing on the mortgage was repaid in this period. However, the sale price of the basement carpark and all office floors need only decrease by approximately 5% before a change in the optimum solution would occur, that is profit maximisation would be achieved by selling in an earlier period.

TABLE 3.1
Cash Flow Results

Year	Pre-tax and post-tax cash surplus accumulated		
	Pre-tax Surplus	Post-tax Accumulated Cash Flow	Post-tax Discounted Cash Flow
1	0	0	0
2	0	0	0
3	0	0	0
4	0	85,268	85,268
5	0	156,464	71,196
6	0	216,403	59,939
7	0	267,340	50,937
8	0	397,526	130,185
9	0	412,443	14,917
10	0	427,360	14,917
11	318,943	761,220	333,860
12	318,943	941,988	180,767
13	791,792	1,595,605	653,616
14	791,792	2,022,254	426,649
15	1,417,129	3,074,240	1,051,986
16	35,715,792	32,088,462	29,014,226
17		14,959,801	-17,128,622

Additional cash is required in years 3-10 as the income derived from leasing does not cover the interest outgoings. Therefore the pre-tax cash surplus in each of these years is 0. The positive figures in the post-tax cash surplus are the tax benefit associated with the depreciation allowance in the respective periods. The post-tax accumulated cash flow in Table 3.1 illustrates the accumulation of funds while the final column shows the figure that is discounted in each period to obtain the total net present value. A negative figure appears in year 17 which is the tax payable associated with the previous year's activities.

Sensitivity Analysis

After the initial base run was completed, further experimentation with the results was undertaken. The impact of varying six key critical factors: discount rate, holding periods, capital availability, interest rates, building costs, and rental growth were analysed.

1. Effect of Variation in Discount Rate
The investor's discount rate or required rate of return was 18%. However, this rate is entirely dependent on individual investor's expectations and objectives. Therefore experimentation was undertaken to investigate the effect on the optimal solution when discount rates of 15%,17%,19%,23%,25%,and 30% are adopted. Note that when doing such experimentation, the discount rate is the only variable altered, and because the objective is to maximise total Net Present Value over the investment period, the development, financial, selling and principal repayment options may change accordingly.

The effect of reducing the discount rate means that the investor's opportunity cost is lower. The use of equity finance is therefore relatively less expensive and the optimum combination includes a greater proportion of equity funding. These optimal solutions involve the maximum potential developments, which include the construction of a basement carpark and air conditioning to all office space. The associated net present values are relatively higher as discount rates increase.

Correspondingly, as the discount rate is increased, the cost of equity finance in relation to mortgage capital becomes more

expensive, and subsequently the levels used decreases. The additional building options outlined above, a basement carpark and air conditioning, are also excluded. The date of sale of individual floors is very sensitive at high discount rates (strata titles). There is a trade-off between cash obtained in the period through sale, or revenue generated from leasing, and the potential for further capital growth, and subsequent sale in the future.

The optimum net present value is reduced significantly with each increase in the investor's required rate of return.

The optimum net present value is reduced significantly with each increase in the investor's required rate of return. Figure 3.1 illustrates the optimum net present value at each discount rate.

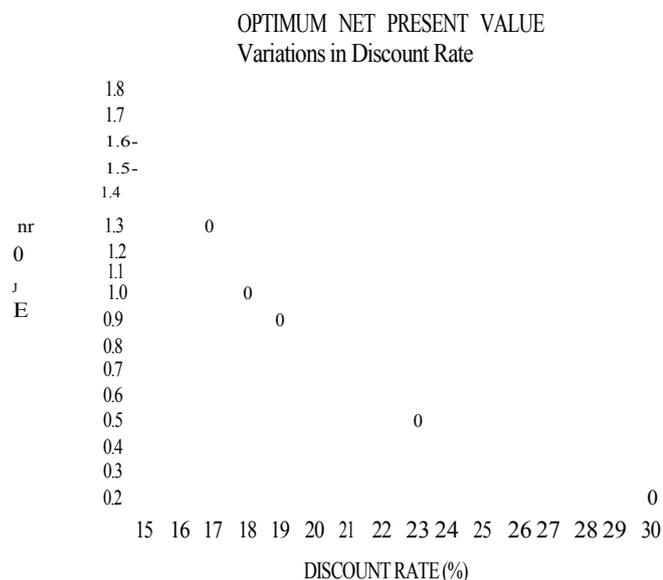


Figure 3.1

2. Effect of Variation in Holding Period

In the base run, the optimum solution was the sale of all floors in the final period year 16. The following section of experimentation concentrated on the effects of different holding period policies on the optimal solution and the determination of the break even holding period, that is, the sale date at which the total net present value is 0. The base run model was run simulating sales of the building in years 14, 12, 10, and 8.

The results indicated that for this particular modelled situation, the optimum holding period policy is long term that is 16 years. The full benefits of rental and associated capital growth can be obtained. This involved the construction of the building to its maximum potential, that is with a basement car park and air conditioning on every floor. If forced to sell at an earlier date, this significantly affects both the development options adopted and the net present values achievable. The break even holding period: that is where the net present value is 0, is approximately 8.5 years. Therefore, if forced to sell prior to this time, the return on investment would be less than 18%, any sale date after this period results in a return greater than 18%.

The associated optimal development at this holding period was more basic consisting of a ground floor carpark with 6 floors of non-air conditioned office space. Figure 3.2 illustrates the net present value achievable at various sale dates. Note that holding period is the only variable altered and because the objective is to maximise net present value, the development options, change, that is as holding period is shortened, fewer floors are constructed with air conditioning and the option of basement carpark is omitted.

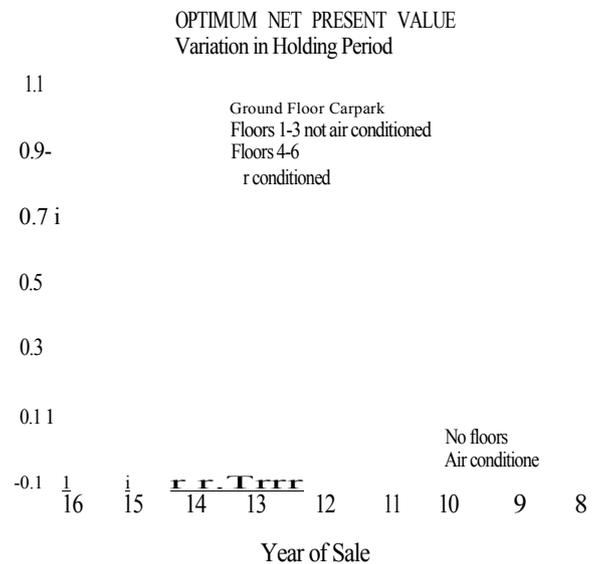


Figure 3.2

3. Effect of Variation in Capital Availability

Runs were undertaken with equity set at \$200,000, \$1 million, \$2 million, \$3 million and all equity funding. The optimum combination of equity and mortgage finance (gearing is approximately 81%) was determined in the base run solution.

Further runs were conducted restricting the overdraft finance level to \$1 million, another restricting first mortgage finance to \$1 million dollars and subsequently increasing the second to \$4 million with the final run extending the overdraft limit to \$3 million.

The major impact of capital availability variations was on net present value. If equity levels are restricted or increased the resulting net present value decreases. The optimal development only altered at either extremes of equity funding, and the leasing activities and final sale period remained the same throughout. The base run solution determined the optimal combination of equity to mortgage funds, and any changes to the equity level can have significant effect on the total net present value. Small changes in mortgage availability did not result in any alteration to the development, leasing or selling activities and caused only more minor variations in net present value.

4. Effect of Variation in Interest Rates

Large amounts of money are required to finance any potential type of development. Therefore the effect of interest rate changes on potential profit projections are a very important factor to consider. The initial model assumed 18% for first mortgage interest rates and 20% for second mortgage and overdraft finance.

Five runs were undertaken varying interest rates for first mortgage between 14-24% and second mortgage and overdraft finance between 16-20% respectively.

The major impact changing interest rates have on the optimal

The major impact changing interest rates have on the optimal solution is its effect on net present values..

solution is its effect on net present values, level of equity funds utilised and the initial development option.

For all runs the building was leased throughout and sold in the final period year 16. All principal repayment occurred at this time also.

As interest rates drop, the proportionate amount of equity finance decreases, as mortgage funds are now relatively more expensive. This also has significant impact on net present values, that is a 2% reduction in interest costs is associated with approximately a 45% increase in net present value.

Correspondingly, as interest rates rise above the opportunity cost of capital (18%), the optimal development changes and it becomes more economic to trade borrowed funds with the use of equity finance. Large reductions in net present value are also experienced with small increases in interest costs. Figure 3.3 illustrates the optimum net present value at different interest rates.

FIGURE 3.3

OPTIMUM NET PRESENT VALUE
Variation in Interest Rates

	-4	-2	0	2	4	6
	%Change in Interest rates					
1st mortgage	14%	16%	18%	20%	22%	24%
2nd mortgage	16%	18%	20%	22%	24%	26%

5. Effect of Variation in Building Costs

The initial capital outlay required is very large and any volatility in this factor will have significant impact on the potential success and profitability of any project. The following section considers the effects on the optimal solution to changes in building costs. Runs were undertaken with cost increases of 10% and 20%, and also decreases of 10% and 20%.

Associated with a decrease in costs and an increase in net present value is a reduction in the amount of equity finance utilised. Therefore, the marginal cost of equity funds must be greater than that of mortgage finance in these runs. However, as

costs increase, the optimum development changes a ground floor carpark with 6 floors of office space is constructed with only floor 6 having air conditioning and the proportion of equity finance utilised increases. With a 10% rise in building costs, there is an associated reduction in net present value of approximately 28%.

6. Effect of Variation in Rental Growth

In the base run model, a rental growth rate and corresponding capital growth rate of 15% was adopted. However, a change in this variable can have significant effects on the revenues generated throughout the investment period. To see the impact of a change in rental growth on the optimal solution, two further runs were undertaken. The first used a rental growth compounding per annum of 12%, the second at 18%.

The figure adopted as the future rental growth level is an important determinant for potential leasing and selling revenue generating activities. A small change in this figure, either up or down, has significant impact on the overall profitability of the project. A 3% overall drop in rental growth is associated with a 56% decrease in the optimal net present value to \$445,923. A 3% overall increase results in a 75% increase in net present value to \$1,786,165. This figure will always be subject to uncertainty as no one can determine what the future growth will be, but by undertaking some sensitivity analysis with this variable, the extent of its effects on net present value can be determined.

Summary

The objective of this section was to examine the application of linear programming as a decision making tool in the real estate investment process. This illustrated that linear programming can be used as a decision-support technique in this field. A range of information is provided in the base solution for the potential investor, together with the impact on the optimal solution of changes in key variables.

The tool is especially useful where the investor has a number of alternative options and is interested in maximising a particular objective such as total net present value. The flexibility and advantage of linear programming is in its ability to discern the optimal solution from a range of options and enables one to determine the effects of changing these factors on the whole investment decision, including optimal development option, gearing level, leasing and selling periods and principal repayments.

However, the time taken to both construct the model and solve it are the main disadvantages, As the model becomes larger and increasingly more complex with a wide range of options and integer variables, the corresponding construction and solving times magnify.

Effective decision-making is dependent on the availability of information which enables the investor to reduce uncertainty...

Conclusions

This study and the three articles have illustrated some new concepts in the feasibility analysis of commercial properties. By following a feasibility of investment procedure (as outlined in

the first article), a full analysis of any potential property investment can be made. This is necessary because of the large capital sums involved with any potential investment. The cost of the investment and the risk of subsequent failure are far greater than before. Effective decision-making is dependent on the availability of information which enables the investor to reduce uncertainty and aid them in discerning between potentially feasible investments and those which may be susceptible to failure.

In my opinion there is considerable scope and need for development of information systems and market research in the property field. The article on market analysis provided a preliminary study to this problem and emphasised the areas of information required.

Financial feasibility analysis is a critical factor to investigate in any investment procedure. This study has proven that Linear Programming can be used in this field. However, in my opinion,

the time to construct and solve the model outweighs its advantages. The use and development of a more simple less time consuming model would be beneficial.

Such a model should be developed to be user friendly, which would be flexible enough to provide a range of information. For example, a simple model to provide a basic profit or land residual figure, could be the first level ranging to a detailed cashflow analysis incorporating all factors throughout the construction and investment period.

Some preliminary work into such a model is currently being undertaken.

Having regard to the preliminary work undertaken in my Thesis, I would hope it will initiate further research and investigation in this area because considerable scope and potential exists for the utilisation of more accurate and realistic decision-making techniques.

Mass Appraisal In New Zealand

By Hamish McDonald

Property Mass Appraisal in simple terms can be defined as the valuation of property on a large scale by efficient methods. This could incorporate a manual approach or a reliance upon computers to produce a value or a combination of the two approaches.

Valuation New Zealand uses a combination. The end result is that we are able to assess values on a large quantum of properties for rating and taxation purposes within any one year. The concept of Mass Appraisal valuations is not new to Valuation New Zealand. For nearly 10 years, our organisation has been developing a computer model which will help staff complete revaluation work efficiently and with a high degree of accuracy. With a change in the standard revaluation cycle from 5 years to 3 years, the need for such a system becomes even more pronounced.

Before looking at the various systems that Valuation New Zealand utilises in undertaking mass appraisal type valuations, an overview of the organisation, staff, roles and systems needs to be provided.

Approximately 300 valuers and 200 support staff are employed in the former Government Valuation Department now known as Valuation New Zealand. The Department was established by statute in 1896, as a central valuing authority to compile and maintain a national valuation roll for rating and taxation purposes to a defined and unified standard.

Statutory Requirements

The Valuation of Land Act 1951 and amendments requires the Valuer-General to revalue all properties in New Zealand at no longer than 5-yearly intervals and produce 3 sets of values:

- capital value
- land value
- value of improvements

As from 1 April 1988 revaluations will be undertaken at 3-yearly intervals and, where required, more frequently.

Main Uses of Valuation Services

There are 231 local bodies in New Zealand and of these approximately 183 rate on land value, 32 on capital value, 10 on

Hamish McDonald INZIV is the Valuer General, Valuation New Zealand. As such he is responsible through his department for a number of statutory requirements including the preparation and maintenance of district valuation rolls.

Valuation New Zealand also operates a number of commercial activities such as the provision of special valuations, consultancy services, real estate market statistics and marketing of property information,

Mr McDonald took up appointment as Valuer-General in February 1988 having previously been Deputy Valuer-General since 1984 and prior to that held a number of positions with the department including four years as Chief Valuer. He has held a number of executive positions in the institute.

annual value with the balance being a mixture of different rating systems.

The Valuation Rolls are also used by the Inland Revenue Department for Land Tax and General Taxation purposes and other special rating authorities such as Water Boards etc use the rolls for General Rating. In addition to compiling the valuation rolls for the above purposes the Department provides a general commercial valuation service to other departments of state, State Owned Enterprises, semi-government organisations and

state employees.

There are approximately 1.3m individual property assessments on the national data base which was computerised in 1969.

Computer Systems

The majority of the department's computer processing requirements are undertaken by the Government Computing Services Ltd operating on a bureau basis.

Comprehensive information (including ownership, rateability, land tenure, legal description, mass appraisal data, and sales transactions) is held on computer for each property in New Zealand.

Data collection is carried out via data entry terminals held at each of the department's district offices and head office. Data keyed into the terminals is transmitted to the Computer Centre via a network of Hewlett Packard mini computers. On average offices will transmit some 70,000,000/80,000,000 characters of data through the network per annum for updating the property files. An on-line enquiry system throughout the department's 28 offices allows direct interrogation of the roll and sales information held on computer.

The valuation roll data and property sales information are stored as separate database structures but are interfaced to allow access to both storage mediums.

The Department has some 134 different programmes developed to allow the input, extraction, and manipulation of data recorded in the valuation roll system.

A computerised system of recording, analysing and listing real estate sales information became operative in 1981. Sales listings are produced, giving national coverage, in convenient geographic areas twice monthly. The listings are cumulative on a quarterly basis. The information is produced in magnetic tape format and the data made available to the 27 district offices plus Head Office initially via micro-fiche. With the advent of On-Line Enquiry facility, staff now have the ability to interrogate the base directly.

The Systems Development

At the inception of the department, all roll entries were handwritten into bound roll books which were maintained by being returned to the department for correction. Later this practice gave way to maintenance advices being sent to the respective taxing authorities as necessary.

Early in the 1900s the typing of rolls was introduced and this together with the typing of roll information onto separate field records by way of preparation for revision field work, was the limit of mechanisation until well after World War II.

In 1950, a system of recording field data (permanent data) which does not change or suffers little change between revisions was introduced and this, together with the introduction of "Bradma" machines represented a major step forward in the department's development. The "Bradma" system consisted mainly of two separate machines "embossers" and "printers". The embossing machines punched information on small metal plates and these were then fed into a printing device to obtain the necessary copies of stored information.

By the late 1960s, the Bradma machines were nearing replacement and in 1967 it was decided to computerise the department's records. This transition commenced in 1969.

Since 1970, Valuation New Zealand has steadily increased its involvement in the data processing area in order to contain operational costs, whilst increasing the overall effectiveness of the organisation's activities. The department's computer processing requirements are undertaken by the Government Computing Service Ltd at the Pipitea Computer Centre, which also services the needs of five other departments, operating on a bureau basis. Pipitea have in use three Unisys A15 mainframe computers as well as other auxiliary equipment to carry out the

requirements of their client departments, while Cumberland Computer Centre utilises an IBM 3084 mainframe computer.

Maintenance of the Valuation Roll

Each change made to the district valuation roll information produces various types of computer output. The initial output produced is a downlisting of maintenance edit lists directed to the originating office via the network system. These edit listings show either the acceptance or rejection of the submitted maintenance changes. This is followed by the mailing of replacement valuation roll slips, for those changes accepted, to those territorial and special rating authorities affected. Advice is also sent to the occupiers and owners of a property if an amendment to the values has been made.

Reconciliation of Rating/Valuation Rolls

Local authorities availing themselves of the department's services must reconcile their rating roll with the valuation roll as at 31 March each year. To assist them the department has developed a system of statement advices produced during the year which summarises all changes made to either the values or the rateability of the property. On the 31 March, statements of accumulated net and gross value totals are provided so that local authorities have a readily accessible history of the amendments made to the valuation roll over the past 12 months.

Valuation New Zealand EDP Services

Various products are produced to assist local authorities, government departments private enterprise and the general public. The territorial and special rating authorities that use the department's services for rating purposes make up the largest and most important client group. Using the valuation roll as their basis, local authorities recover over \$NZ 750,000,000 per annum in rates. Programs have been developed to provide our larger clients, other than local authorities, with ongoing maintenance and thus providing them with up-to-date information on the status of their properties. The Inland Revenue Department is provided with an annual land tax roll and on-line access to the Valuation New Zealand data base.

Other services include extracts from the valuation roll information in either hard copy or on magnetic tapes, listing showing owners and addresses of properties, land use data, property categorisations (e.g. the number of farmland, residential, commercial and industrial properties within a given area) and other roll information formatted to comply with individual requirements. This extraction facility has been used to give specific data to clients for on-shore oil exploration surveys, direct mail marketing, compilation of real estate information, production of a register of all Government owned land, and the setting up of software packages related to land information for sale in New Zealand and overseas. These name just a few of the many varied uses that individual clients have for this product.

**Each office now has access
to all properties in New
Zealand rather than just
their own district.**

National On-Line Enquiry System.

On-line enquiry terminals have been installed in each of the 27 district offices and head office, and allow direct interrogation of the roll and sales information held on computer. Offices no longer hold a paper copy of the valuation roll, nor do they need to wait up to one week to receive amended roll slips. Each office

now has access to all properties in New Zealand rather than just their own district. In conjunction with this system is the capability to access data by occupier/owner name, property address, valuation reference and certificate of title. Currently several large Government organisations have continuous access to the On-Line Enquiry System via terminals in many of their offices. These include Inland Revenue Department, Housing Corporation and a pilot study involving Department of Social Welfare. Public on-line enquiry printouts of district valuation roll information or property sales information are available at the counter.

A further development which may have an impact on the databases is the current investigation into the formation of a Land Information System (LIS). In the first stage of development it is proposed that LIS will comprise data from the valuation database, information on land titles, ownership and mapping data. As a second stage it is hoped to introduce data on soils farmland production, assessments and other data on land presently in existence in manual systems.

The Sales Database

1 January 1981 marked the beginning of a significant step forward for Valuation New Zealand, for it was on this date that the department brought into operation their computerised system of sales recording, increased the range of data that was previously recorded under the manual sales listings, but also improved the published land market statistics both in quality and in reducing the time lag in the production of them

The Sales Data

The basis of both the previous manual and the more recent computerised sales system is Section 49 of the Rating Act 1967.

Under this section, every owner of land who sells it, or part thereof, is required to give notice in writing to the Valuer-General within one month of the sale. This advice is usually filed by the vendor's solicitor on the department's "Notice of Change" form and the details of each transaction are provided.

Accuracy and Timeliness

A comprehensive editing system is employed to obtain a high degree of accuracy in the sale data, however, as with any very heterogeneous mix of properties perfectly "clean" data is extremely difficult (and expensive) to obtain.

With respect to timeliness, delays in the recording of sales information are inevitable. As mentioned before, Section 49 of the Rating Act 1967, requires every owner of land who sells it to give notice to the Valuer-General within one month of the sale. In practice, a proportion of notices are not given within this month. Among the many and varied reasons for this is that while the price may be agreed to, the sale is often made conditional on another property being sold, and/or finance being available, etc. In addition to the slowness of notification of some sales, there are processing delays such as our offices having difficulty in obtaining all the information required, often necessitating telephone calls to solicitors.

In 1980, prior to the commencement of the computerised sales system, the department undertook a survey to determine the length of time between the Date of Agreement (when the sale price was agreed to) and the Date of Receipt (when the sale notice was received in the department). It was found that the number of days taken varied according to the property category -ranging from an average of 70.7 days for houses to 130.1 days for farmland.

The Number of Sales

In the year ended 30 June 1987, the Department was notified of 128,880 sales, of which approximately 83% were considered to be freehold open market transactions. The majority of the

sales notified were for single family residential houses (71,192 or 55.2%).

Computer Access by the Public

Currently, Valuation New Zealand is operating a videotex system "Provides" in conjunction with the Government Computing Service Ltd. It was developed with the property professional in mind and enables users to obtain the most up-to-date information from the department's District Valuation Roll database or from the property sales database, without leaving their own offices.

PROVIDES a world first

As well as valuation information and property sales information, Provides users are able to access real estate market statistics, a research enquiry service, a help service (to explain the terms used), a message service and other customer facilities. As far as the Department is aware, Provides, is the world's first "dial-up from your own office" property information service.

Mass Appraisal Techniques

In the past Valuation New Zealand has undertaken rating valuations for local authorities based upon a 5-year cycle. The 5-year cycle, coupled with the valuing resources available meant most properties within a Territorial Local Authority (TLA) were able to be inspected during the course of a revaluation. In a residential situation, this invariably involved walking onto each property, contacting the owner/occupier and explaining the reason for visit, physically inspecting the various improvements such as the dwelling, buildings, landscaping, or where necessary an interior inspection may be required to update our plans that we hold on some 1.3 million properties throughout New Zealand. These plans or permanent data (P.D.) provide our organisation with the basic information to value

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each property. The P.D. contains the following data:

- Plan of principal structure(s) e.g.: dwelling
factory
warehouse
office/retail, etc
- Internal floor layout of principal structure.
- List of ancillary buildings and/or improvements.
- Construction of buildings/principal structure(s).
- Comments on condition/additions, alterations (date changes took place)
- Legal description of land.
- Details of land shape/contour.
- Zoning.

This information plus the 20 variables that are recorded on each residential property has been collected over several decades and it is not surprising that the cost of replacing this vast database would be prohibitive today. The variables form part of the basis for assessing values by computer. On each occasion a residential property is visited by one of our staff, then the variables will be checked to make sure that they related directly to the current physical state of the property and its surrounds.

With the introduction of a 3-year revaluation cycle, the number of properties to be valued in one year has increased significantly. In terms of resources available and costs involved, the old concept of inspecting every property had had to be redeveloped.

Many properties within individual TLAs will not alter physically over many years. Therefore our permanent data will represent a fair and up-to-date reflection of the physical state of the property. There is in effect no need to inspect every single property each time a revaluation is due. This concept is further borne out by several court cases, the most prominent being the Peachy Property Corporation Case (1966) with more recent New Zealand cases confirming that decision.

The reality of not having to inspect every single property on revaluation is made possible by ensuring that during the years between a revaluation (i.e. between years 1 and 3) any physical changes that occur to property are noted and relevant alterations to values and data are made.

The change from a manual valuing system to a computer based facility has generally been well accepted by staff.

The change from a manual valuing system to a computer based facility has generally been well accepted by staff. The realisation that we have to provide an efficient, cost effective service to clients while maintaining an acceptable degree of quality has greatly aided this acceptance.

The fact that a computer is now being used to generate values that reflect fairly the value of a particular property as at a specific date can for some Valuers be somewhat difficult to accept. It remains however, the responsibility of the valuer to make the final decision as to a property's values, not the computer. To some extent, now when a valuer or valuation officer enters any property one of the most important actions to undertake is to check the data we hold on the property to ensure that it fairly reflects the current situation.

Many staff are finding now that their valuing skills are even more necessary, as they are required to make an informed

decision on a property's values with more frequency and indeed instead of valuing, say, 25-30 residential properties per day and making value decisions, they are now required to value up to 80 properties per day involving a similar number of valuing judgements.

The public have accepted our valuations with a high degree of confidence. Upon the issue of a revaluation for a local authority or where a subdivision of existing land occurs, or a new improvement is actioned on a property, the issue of an updated owner's notice allows the owner/occupier to have the right of objection to the new values for a period of one month following the issue of the owner's notice. On average 2% of the people eligible to object in actual fact do so. This is an extremely low figure. The majority of people objecting do so because of either;

- a. Changes to the property, that have occurred since our last inspection.
- b. Our values are seen as the instrument for the assessing of various taxes e.g.: Land Tax, Local Authority Rates.

With a move to 3-yearly revaluations, staff will now have to develop a greater understanding of the values that are predicted by the computer. Hence there exists a need to have our staff even more confident in using the predicted computer values. In order to achieve this, two aspects need to be addressed.

- a. Our computer prediction model needs to be refined further.
- b. Staff need to be trained in how the values are predicted in order that a wider staff acceptance of the predicted values can be achieved.

Computer Estimates

Valuation New Zealand has been involved in research into computer assisted evaluation techniques since 1968 although developments did not proceed in earnest until 1972. In New Zealand approximately half of the properties are urban, single family residences, and research was therefore aimed in this direction. Several pilot studies were undertaken, initially in homogeneous areas but later in localities with more diverse property types.

Most studies involved an initial inspection to capture data, followed by the generation of a value estimate from this data, and a second inspection to finalise a value. However, in one exercise a value was assessed by traditional methods at the first inspection stage and later reviewed with the assistance of a regression based estimate (only 25% were subsequently altered). The most interesting aspect of this exercise was that it provided the opportunity to compare the computer estimate with the value of traditional means, with the following results:

- Reviewed Manual Assessment: 61% within 10% of sale price
- Computer Estimate: 56% within 10% of sale price.

As indicated earlier, these studies involved the capture of data not already held on the department's computer file.

Information collated for each individual holding in N.Z. included property zoning and land use, age, construction and floor area details of buildings.

It was decided to investigate the possibility of using this data to generate estimates of property values. Much of the data was not particularly detailed and as expected the results were not as reliable as for the models based on specially collected data. However, the results were still acceptable and the advantage of the models based on land use data was that they provided the opportunity to establish a nation wide mass appraisal system immediately.

This culminated in the decision to proceed with a full scale computer assisted programme for the urban single family residence on the following basis.

1. Three estimates for each property would be provided for all future urban revisions.
 Predict estimate: based purely on the land use data.
 Index estimate: based on existing roll values and land use data.
 Modindex estimate: combination of the first two.
2. Mass appraisal data was collected as the properties were inspected. As New Zealand local authorities are revalued every five years, mass appraisal data was collected and stored on the department's data base for all single family properties by the end of 1984.

The sales are extensively analysed to provide a complete breakdown of each sale into components that can be influential variables in a regression equation.

Field Application

The mass appraisal data now held on the database has made it possible to generate value estimates utilising this information for all local authorities undergoing revaluation.

Table 1 lists the variables that are currently used in the Mass Appraisal process.

TABLE 1
 VARIABLES CURRENTLY USED IN MASS APPRAISAL DATA
 BASED COMPUTING MODELS

- Roll number- reflection of locality
- Date of sale
- Sale price
- Property Category-for residential defines year built or quality of dwelling
- Existing roll capital value
- Existing roll land value
- Section size
- Zoning
- Condition of walls and roof
- Construction of walls and roof
- Class of surrounding improvements
- Position of site
- Contour of site
- Nature of landscaping
- View
- Scope
- House type
- Modernisation
- Effective year built
- Area of main living level
- Total area of house
- Poor foundations
- Deck
- Laundry/workshop area
- Large other improvements on site
- Car access to site
- Formed driveway
- Number of garages being integral part of dwelling
- Number of garages being free standing from dwelling Is property atypical

Upon review of the valuation roll for a local authority, the District Valuer may provide details of localised influences which will supplement the sales information. The sales database provides the 'raw material' from which the three regression equations will be compiled. The structure of the sales database is such that it allows only those sales identified as 'bona fide' transactions to be called up by category and sale date.

The sales are extensively analysed to provide a complete breakdown of each sale into components that can be influential variables in a regression equation. The statistical techniques provide for example such information as the number of sales within the sales sample which are post-war bungalows, the mean sale price of the properties of that design, as well as the respective minimum and maximum sale price and the standard deviation of that group of sales. By generating similar statistical information for each of the variables contributing to the composite sale price, it becomes possible to establish the characteristics of a 'model sale' for the locality. Using stepwise regression procedures, the value influence associated with each variable can be derived from the sales evidence and the three regression equations compiled.

Each equation is tested back against a sample of the latest sales for accuracy i.e. the actual sale price is withheld and 'probably values' are generated from the data pertaining to the property. When a level of acceptability is established, the equations are applied to the information held on all single residential properties within the area. These estimates of value for all properties along with the statistical information and test lines are sent to the District Valuer for review in the field.

When the District Valuer is satisfied that the value estimates produced fairly and consistently reflect the market, field books are produced. On each field record pertaining to the urban single family property is recorded the land use data, mass appraisal data, three computer estimates of value and the effective date of the estimate.

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Latest Results

Table 2 (overpage) shows a selection of the results achieved in the computer modes for single family properties in the computer models for 1987.

In the case of larger cities where the inspections take place over a period of twelve months or more, the revaluation is divided into stages of like properties and separate models are generated.

Information provided includes the mean sale price, the mean of each of the three estimates and the numbers of estimates within 10% of the sale price. Best results were generally achieved in sectors of the cities where there were large numbers of modern homogeneous properties. Poorest results tended to be in the small boroughs where property types are very diverse, and in the older sectors of the cities.

Computer adjustments

During the period of research into producing computer generated estimates, other programmes which could be of assistance to the valuation function were also investigated. One of these was the facility to make adjustments to values which had been assessed at the time of inspection but were becoming dated as the property market moved. Throughout the latter part of the 1970s and during early 1980, property values in New Zealand were reasonably static and there was little need for such a facility. However, from the middle of 1980 the property market has been considerably more volatile and large numbers of properties which had been inspected required adjustments to their inspected values.

Field Application

Upon completion of the field inspections for the properties within a local authority under revision, computer generated reports now provide an almost immediate tool by which District Valuers can monitor market activity in relation to the inspected values.

The flexibility of the sale and data systems is such they they combine to provide the means whereby it is possible to quickly identify where the market currently is relative to the preliminary assessment of value. The reports provide assistance to the District Valuer in determining what, if any inflation/deflation factors need to be applied to the inspected values so that they will equate with the latest market data.

The Approach to Values Adjustment

Capital values, land values and value of improvements can each be adjusted independently.

The Options Available

Adjustments may be carried out by selection of one or a series of the following options and can be made on a percentage or lump sum basis:

- a. Locality parameters (roll).
- b. Property type (category).
- c. Value ranges.
- d. Mass appraisal data or land use data.

Computer Output Printouts Available

When the adjustment process has been completed the Dis-

MASS APPRAISAL RESULTS SINGLE FAMILY PROPERTIES 1987

Local Authority	Final Mean Sale Price	Final Mean Value from each Equation			% Within 10% of Sale Price		
		Predict	Index	Modindex	Predict	Index	Modindex
Cambridge Borough	76,493	78,031	75,156	77,609	66	63	69
Christchurch City							
Stage 4	54,152	50,890	53,254	50,418	75	67	81
Stage 6	81,837	82,500	81,531	81,885	75	79	75
Ellerslie Borough	111,235	107,882	108,205	109,558	56	44	53
Hutt County (Part)	128,381	127,606	126,727	128,909	82	64	88
Invercargill City							
Stage 5	50,572	52,319	50,180	52,166	75	81	83
Kaikohe Borough	54,046	52,866	54,583	54,700	67	57	63
Lower Hutt city	201,589	196,036	191,642	200,821	69	62	79
Matamata Borough	78,275	77,216	78,905	77,418	68	73	70
Mt Roskill Borough							
Stage 3	113,342	112,702	108,105	112,105	66	58	76
Napier City							
Stage 5	91,073	90,147	91,661	92,147	79	85	76
Oamaru Broough							
Stage 1	39,745	40,758	39,758	40,682	62	41	66
Rangiora District	85,094	80,071	82,766	81,892	58	60	62
Remuera							
(Part Auckland City)							
Stage 1	344,940	340,270	337,554	349,675	43	62	54
Tauranga City							
Stage 3	95,400	93,632	93,588	95,720	71	74	74
Stage 5	89,947	90,023	93,197	90,430	72	70	77
Te Awamutu Borough	61,887	59,555	59,913	60,931	52	69	66
Whangarei City							
Stage 1	69,815	70,112	69,908	69,816	80	67	82

Basis for all is MAS

trict Valuer is supplied with the results on lineflow.

The information which can be supplied in the computer listing includes the following data: valuation reference number, address of property, category, inspection values, indexed value and ratios (indexed values/inspection values). In the rural sector, statistics such as land value per hectare and capital value per hectare are also included.

District Valuers need to check the lineflow and are required to confirm that their adjustment requirements have been met. When the district Valuer is satisfied that these adjusted values now reflect the current market evidence they are entered into the database thereby deleting the previous 'inspect values'.

Savings Through Computer Assistance

Computer assistance whether by producing value estimates or adjustments or a combination of the two methods has produced significant savings in terms of valuer-days required to complete a revaluation and hence total real costs associated with a revaluation. Production has improved in residential localities from around 12 assessments per person per day prior to computer assistance to around 20 per person per day now. This represents a 67% improvement in production and hence significant savings in several areas. With further development of value prediction models in the future, further saving can be expected. The greatest savings are currently being achieved where District Valuers have accepted the changes and are making the best use of the estimates.

Current Developments

Valuation New Zealand has continued further research into the computer assisted valuation process.

At present, there are some 96,000 ownership units within New Zealand. These are fairly homogeneous in nature and in many ways very similar to residential properties. An estimate of value can be produced by indexing the old capital value, but taking into account the locality through the roll number. It is hoped to develop this system even further in the near future to produce a more accurate reflection of value.

In 1982, a pilot study was undertaken to ascertain whether computer generated estimates of value could be extended to the rural sector.

This study drew on the extensive range of data currently stored in the Department's manual records. The results of this study were reasonably promising, but further refinement is still required in order that acceptable results can be achieved.

Presently, Valuation New Zealand is undertaking a review of its present information system which includes the use of value prediction models. With our future needs in addition to our clients' requirements, the further development of value prediction models is a priority. With this in mind, it is anticipated that over the next 12 months, numerous overseas research work as well as our own research will be analysed and a pilot study introduced to refine our present system even further. Initially the refinement of value prediction models for residential property will be developed further, as well as further work on commercial and industrial value models. Some initial work has been undertaken on this aspect, but a fully computer based prediction model is yet to be put in place. Presently many variables and factors have to be entered into the system for individual properties e.g. rentals, capitalisation rate.

Conclusions

The valuation of a large number of properties in a short space of time is a difficult task and can be expensive if only manual

methods are used.

The use of computer assistance by Valuation New Zealand has proved cost effective while at the same time meeting acceptable standards of quality and accuracy.

...the responsibility for the final decision as to the property's value rests with the Valuer and not the computer.

From the Valuer's point of view, computer assistance has received a mixed reception for a variety of reasons which have been discussed.

However, where valuing staff have been closely involved in producing the estimates and where a measure of control over the process has been exercised greater confidence in the techniques is gained.

It must be emphasised that the responsibility for the final decision as to the property's value rests with the Valuer and not the computer.

Advances in computer technology will undoubtedly reduce the costs of hardware and software and allow valuers the ability to use computer assisted valuation techniques as a tool in the field and confidence in the end product will result.

Valuation New Zealand is confident that the mass appraisal techniques as they are further enhanced will meet the needs of valuers while at the same time producing a quality service to clients which is cost effective.

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The International Investment Market

An address by Colin Reynolds

The Valuer is an increasingly important member of the financial community, their opinions and decisions affect the interests of many individuals and companies. As an international developer, I am acutely aware of the critical role they play.

Three morals: the client is always right; valuation is an inexact science; and good friends are often made in business...

Because continual changes in living patterns bring improvements and refinements in economic and development concepts and techniques, all of us must be prepared to set aside some of our precious time for research and self development and self analysis. The Institute of Valuers is a professional association, and justly recognised as such.

For the following overview, I have selected a topical cross section of international activity. I have chosen some Pacific rim countries as I see this area as a growth region of the 1990s real estate. Finally, I will review some of the latest trends in development and investment financing.

As you will realise I will be making some *value* judgements about historical occurrences and the way of the future, and I trust that these judgements may be of *value* to you, in your *evaluation* of the future.

World Overview

We increasingly live in a global village. Satellites, facsimile machines, the Concorde, video phones, all these things make us close neighbours. The economic context of property must also increasingly be focussed on the global neighbourhood, rather than narrowly nationalistic.

It is an accepted and prudent tenet that diversification of assets, properly handled, lends stability and safety to portfolios. Accordingly, there are significant advantages in diversifying a property investment portfolio into buildings in major world cities. These advantages are the safety that results from a lack of dependence on a single economy or currency, the greater potential liquidity available in large overseas markets and potentially better performance in the medium to long term in particular sectors.

It is the Property Portfolio Manager's task to select investments which offer the optimum combination of income yield and capital growth. Generally speaking, the *higher* the yield, the *higher* the risk and the *lower* the potential capital growth.

Internationally, institutions which have for the past three years or so concentrated on equity markets are now showing increased interest in property. The October Stockmarket Crash has underscored the virtues of property values. There has been little panic selling and there has been demand by buyers overall, unlike the equity markets.

Prime property represents in most areas a finite resource, one which, with increasing expectations and population, will become more in demand by the year, and one which is largely indestructible though maybe not so in the Middle East or Central America.

Over the decades the steady, sometimes generous, returns from property have compared well with equities, but even when the returns are not spectacular property offers a security which overrides the cyclical nature of property demand. We must also remember that these cycles tend to be shallower than those for equities.

Colin Reynolds, Chairman of the Chase Corporation presented this personal overview of the property market during a keynote address at the General Session of the 14th Pan Pacific Congress of Real Estate Appraisers, Valuers and Counsellors on 22 March 1988.

For example, throughout the 1930s property values did not fall nearly as far as the share market, and of course enjoyed an almost continuous rise after World War II.

It is difficult to make direct comparisons because the nature of central business district property investment has changed so dramatically in the past half-century.

The value of commercial property has increased in real terms steadily and the long-term trend has been for the prices of prime sites to increase well above inflation.

There may be a slight variation on property over, say, a decade, but the trend line is remarkably consistent and such factors as interest rates do not have the same effect as on the stockmarket. Commercial property rentals are closely linked to supply and demand, and these factors can be predicted with some accuracy.

While property development is inherently competitive and there will always be development cycles, these need not necessarily lead to boom and bust...

While property development is inherently competitive and there will always be development cycles, these need not necessarily lead to boom and bust if market fundamentals of supply and demand are not forgotten.

There now exists an ever-growing resource base of information to help in measuring trends. In 1988 there is little reason to be ill-informed, remembering that the speed of information flows can exaggerate trends to extremes.

What will 1988 bring? Japan is set to consolidate its position as the main force in the world's investment property markets.

It will significantly widen its involvement beyond the United States, which has provided the single biggest overseas home for Japanese investment funds in recent years. Australia will be one of the major recipients and, I believe, so will New Zealand.

British and American outward property investors will offer little challenge to Japanese supremacy, though comparative newcomers such as Australia and New Zealand, will make their mark internationally. Nor should we forget the Asian money moving out of Hong Kong and the Deutschemark's flight from the threat of communism in Central Europe. I would now like to review the markets referred to earlier and, where possible, define trends for these specific geographic markets.

USA The Big Daddy Of Them All

Real estate in the United States will always appeal to a world wide marketplace, but it has become highly sophisticated and competitive, with many sectors oversupplied like 52 different markets.

Investors need to be wary, the United States property markets are being internationalised at a record rate. Japanese investors, in particular, are pumping billions of dollars into the industry, followed by the Germans, Dutch and the British, even the Australians, like Chase Corporation, Lend Lease, Hooker, and Jones are there on an ever increasing scale.

A Survey of International Investment in July 1987 by Coldwell Banker of Boston, found that of the 16 largest acquisitions of US office buildings since 1986, the Japanese acquired all 16. A pretty fair batting average. Furthermore, they have catapulted into the number two slot in terms of ownership of the top 200 major office buildings in the United States in foreign hands. But, put in perspective, the Canadian's investment over the last decade is still more substantial. While the Japanese have moved ahead of the rest of the pack, they still have to do a lot of buying to catch up with Canadian investment in the United States.

However, the point should be made that the Canadian investment came from the developers borrowing in the United States for construction activities there, and they have maintained ownership of these completed projects. The Canadians bought much wholesale, most Japanese investment has been retail though this is changing.

International investment in the United States to date, outside that of the Canadians, has been highly selective in a handful of cities and then, almost exclusively in new, well-located, fully leased office towers. That investment is currently worth around 20 billion dollars, of which over 95 percent is concentrated in ten major markets.

In fact, nearly half the downtown office market in Los Angeles is owned by foreign investors. But, foreign investors are finding that a product for sale in these cities is drying up. To keep up the pace, investors like the Japanese must do one of two things. First, diversify geographically and continue to acquire Class "A" buildings, but in less prominent cities [Coldwell Banker Points to Baltimore, Cincinnati, Phoenix and San Diego]; or second, diversify to alternative product type in the major urban areas.

Which way will they go? I for one believe that they will diversify geographically into quality buildings. More than 50 leading Japanese institutions, property companies, construction firms and developers are now active in the United States, following in the wake of the pioneering Mutual Insurance companies.

Let's look at a victim of the October Stockmarket Crash Manhattan's commercial real estate, previously one of the Japanese Investor's first choices. After a booming decade during which landlords reaped tremendous profits and New York's market was the nation's hottest, real estate values are weakening.

Rents in the nation's biggest and most expensive market are

dropping, tenants find they are in demand, and a substantial block of space is empty. After a decade of heady growth, projects are being deferred or killed. Whether the downturn is long lived will probably depend on when financial markets recover. So far, the downtown financial district has weakened most.

According to January's figures, rents in the Wall Street area had fallen 5 - 10 percent, and vacancy in the area was 11.5 percent, up from 9.8 percent a year earlier. The question is has the extra space resulted, in the main, through redundancies due to the October Stockmarket Crash or from insider trading indictments.

The outlook for more buildings is cloudy. Even before the crash, Tishman Speyer Properties Inc., one of the city's biggest developers, abandoned plans for a skyscraper on the west side. It is now pursuing plans for condominiums in China, where it finds the market more attractive and that tells us something. The upside is that fewer office completions could secure a tighter market for Manhattan's Mid Town in 1989.

The golden rule, as always, is that Real Estate is cyclical. As a contrast then, let's look at Chicago. This is the centre of "today's" development and displays the characteristics necessary for growth. The fact is that Chicago is moving rapidly and happily towards a complete metamorphosis - from a centre of heavy industry to a major financial centre.

Law firms, accountants, advertising agencies, securities and commodities brokerages continue to move in and to expand, sharply reducing downtown vacancy rates even though 2.88 million square feet of new buildings opened last year in the central business district. The strength of the city's office market has already attracted the attention of offshore investors, notably the Japanese.

Downtown Chicago is also undergoing an unprecedented retail boom that promises to change the way the city shops. Approximately 2.8 million square feet of retail development has been proposed or is under construction, an amount which, if developed in its entirety would expand by nearly 50 percent the central area's 5.7 million square feet retail base.

Developers say that the additional retail construction is warranted by the area's steady growth in annual sales, expanding populations of resident and office workers, and rising demand for downtown locations by national retail chains.

In addition, no fewer than five new hotels presently at various stages of construction will put central Chicago back in place as the foremost location for conventions and trade shows. This lodging house bonanza reflects the growth of the city's business and financial services sectors.

The next market we will look at is just a short hop across the Atlantic Ocean from the United States.

United Kingdom/London

Britain's financial services revolution [the big bang] has had a profound effect on the property investment market. As the barriers between traditionally distinct sectors of the finance industry have been swept away, so too have many of the historic assumptions about property's isolated position within an institutional portfolio of investments.

The new large-area buildings needed to house financial conglomerates within and around the city of London have acted as the focus for a range of innovative approaches to development funding. Financial institutions, bankers, stockbrokers and investment surveyors have come together to tackle the market's liquidity problems. One of the results of the industry's new willingness to accept change is visible with the start of trading in unutilised and securitised property on a new and wider scale.

Many institutional fund managers have also been adjusting the balance of their holdings by re-weighting their holdings of office, retail or industrial properties; others have been trading out of prime sectors with restricted potential for future capital growth, and adding a proportion of higher-yielding secondary properties to improve the overall performance of their portfolios.

The secondary investment market is now more active than it has been for decades, and the days are long gone when institutional buyers merely competed for the latest prime development to lock away for an indeterminate future. Despite growing concern about the resilience of the consumer spending 'boom', prime and near-prime retail properties remain popular at yields down to 4 percent.

Institutional buyers have again become increasingly willing to consider prime central area shop properties outside the south east, and there is considerable demand for retail warehouses throughout the country.

In the office market, there is still a discount for size on larger city of London and west end properties. Prime city offices up to 15 million pounds sterling continue to be in demand on yields down to 4.5 percent, while the narrower market for comparable individual city office properties valued at £15 million or more, takes initial yields to over 5 percent.

Over £2 billion poured into the city of London's land and buildings last year, nearly twice as much as in 1986, about three times as much as in 1985 and nearly six times as much as in 1984. But, because of Heritage Commission Orders on London buildings in relation to rebuilding restrictions, and restrictions on property size and plot ratios, much of London is refurbished or redeveloped behind the original facade. Therefore London's prime properties tend to be smaller than in other markets.

The exceptional levels of demand for city offices and development response has raised the spectre of oversupply.

The exceptional levels of demand for offices in the city in recent years, and the development response to that demand, have inevitably raised the spectre of eventual oversupply. However, the current supply-demand imbalance is so acute that nearly 70 percent of office floorspace under construction at the end of 1986 was pre-committed to occupiers, representing one of the lowest levels of speculative development activity in the city in the 1980s. The situation was similar at the end of 1987.

The current supply and demand statistics suggest that as the expansion phase of financial market activity contracts, especially in the post Stockmarket Crash environment, last year's shortage of accommodation may be reversed.

It is, however, far too early to make firm predictions about the market in the 1990s, as we are currently seeing stockmarkets worldwide start to claw their way back up towards pre-crash values and activity.

Our next stop, in reviewing regional property markets, is a new city which has taken advantage of a major event.

Seoul

As gold fever olympic-style gripped Seoul in September and October this year, the world's attention turned to South Korea. Many felt that such attention could be the catalyst for the emergence of this growing nation into its full potential -

political as well as economic.

South Korea has exhibited extraordinary progress; at the end of the Korean War in 1953 the country was devastated, Seoul itself almost completely flattened, today it is moving swiftly to overtake the world's traditional industrial power-houses.

...one of the fastest growing economies in the world...

It is one of the fastest growing economies in the world, and its indicators are impressive; gross national product increased at about 7.5 percent per annum for the ten years to 1986 compared to an OECD average of about 2.9 percent.

Approved foreign investment has also increased in varying degrees. Investment rose from US\$500 million in 1985 to US\$740 million in 1986.

Foreign investment in real estate is subject to strict Government controls to prevent the over-heating which has occurred in the past, and acquisition of commercial property by a foreign corporation is only allowed for the purpose of carrying on a business. This market control in fact creates major distortions in investment patterns. It accentuates the peaks [excess demand] and compounds the troughs [over supply]. Government control is always bad long term for the property market.

Deregulation and an influx of foreign investment are essential to stabilise the economy and the stock and property markets. There are no formal statistics available to show the exact stock of office space in Seoul. From various market surveys it appears that up to the end of 1987 the total stock of Grade "A" space would have risen to approximately 3.6 million square metres, compared to other office markets in the Pacific region e.g:

1. Hong Kong 2.36 million square metres
[Wanchai/Causeway Bay, Central, Tsimshatsui]
2. Tokyo CBD 4.0 million square metres
3. Sydney CBD 3.4 million square metres

With inflation well into double digits for much of the 1970s, investors with large amounts of surplus funds turned to real estate and a booming property market ensued.

Strict measures were imposed in the early 1980s to control real estate speculation; however continuing office development was supported by a stockmarket boom stimulated by reducing inflation and interest rates and lower imported oil prices.

1. Hong Kong -1.3%
2. Tokyo 0%
3. Sydney 1.1 %

By Asian standards, Seoul is in pure rental terms a relatively cheap office location, with prime office rents at levels of around A\$240/m²/per annum inclusive of maintenance [but excluding interest foregone on deposit sums].

Regional prime rents by comparison are:

1. Hong Kong A\$720/m²/ pa
2. Tokyo A\$2,400/m²/ pa
3. Sydney- A\$600/m²/ pa

The payment of key money [about ten times monthly rent] adds an up-front cost but is refundable - though it is a very strange procedure indeed.

Some observers consider the massive spate of commercial development since 1984 to be purely part of the Government encouraged modernisation of Seoul in preparation for the Olympic Games this year. Whilst the phenomenon of commercial re-development unrelated to demand is nothing new in Asia, the scale of current vacancy factors in Seoul indicates that the establishment of an ordered property development market is

still some years off.

However, unlike many other Asian capitals, commercial redevelopment in Seoul has been matched with improvements in infrastructure and communications. In the event that plans for deregulation come to fruition, the scene is already set for a major influx of overseas investment. This is a market for the punter if you can get a bet.

Tokyo, Hong Kong, Singapore

Now a quick profile of the comparable market indicators for Tokyo, Hong Kong and Singapore: very different cities, not only in size but also because of their economic hinterlands.

Each is an important property market in its own right but the spectacular growth of Tokyo, making it now the largest metropolitan area in the world, and the world's most expensive market, leads us to place particular emphasis on the economic forces underlying the Japanese capital.

The growth of Tokyo, and in particular its emergence alongside London and New York as one of the three leading financial markets, hinges on the performance of the Japanese economy. It has performed well and long-term capital outflows have risen to make Japan the largest net creditor nation.

Japan: one of the most highly urbanised OECD countries...

Japan is one of the most highly urbanised OECD countries, this growth and urbanisation has occurred largely over the last 40 years. Between 1960 and 1980 the national population grew by 26 percent, the urban population by 70 percent. The additional 18 million residents forecast by the year 2000 is equivalent to almost two more cities the size of Tokyo. However, the population is forecast to stabilise at the end of the century.

The scale and speed of urbanisation have brought major problems, complicating the process of urban development and making urban policy an important strand of Government policy.

The intensity of land use and the complications of land assembly have resulted in high land prices.

There has also been a long term shortage of office space in Tokyo, despite steady growth in the stock of floor space to about 180 million square feet. Vacancy rates have been less than 0.5 percent since 1984. Office rents in central Tokyo are now the highest in the world.

Political stability, an expanding economy and strong currency provide a safe investment climate in Japan. However, foreign investors need to note that the Japanese Government requires reports prior to their investments and reserves the right to reject foreign speculation.

In summary, investors need to consider long-term rather than short-term prospects. This is because short-term gains realised by corporations within ten years are subject to a special 20 percent tax, *in addition to normal corporate tax*.

Hong Kong is a British Colony administered by a Governor appointed by the UK Government, and is the world property market's biggest see-saw. The colony has had high rates of economic growth but, like Singapore, suffered a market setback in the mid 1980s. This is consistently one of the most expensive office markets in the world and rents in the three main office locations have taken off since early 1985.

There are reports of increasing interest in owner-occupation, but a shortage of properties for sale. There is also a shortage of prime office space at a time of strong industrial growth.

The shortage of land is created by the Government control-

ling how much land is available at any one time, and again, as in Seoul, we see high land values being kept artificially high by Government regulation.

Prime Office Space	
Stock [1987]	26 million sq feet
Take up [1986]	1.7 million sq feet
Vacancy [end 1986]	3%

Take up in 1987 is reckoned to be the highest since 1981, but the forecasts for 1988 are higher.

The historically very low vacancy rate has produced strong recent rises in rents; up 44 percent since the start of 1985 but the downside to this is the severity of the downturns when they occur - sometimes more than double the rises.

Singapore is a recovery market. Its traditional role has been as an entrepot port but its emerging role is as a regional banking and finance centre. It is also noted for having one of the highest standards of living in Asia and for its steady gross domestic product growth.

The sudden decline in real output in 1985 led to a far reaching review of economic problems by the Government. The main industrial sectors have shown signs of recovery in late 1986 and GDP growth is projected to be four to five percent this year. The steepest drop in GDP was in the construction sector, going from a 30 percent growth rate in early 1983 to minus 30 percent by the end of 1986.

Office Stock March 1986	30 million sq feet
Vacancy Rate	17.5 percent
Recent Average Absorption	1.1 million sq feet pa
Potential New Supply to End 1991	6.2 million sq feet
Under Construction June 1986	0.53 million sq feet

It will still take several years for commercial markets to absorb available supply of space at the current rate of take up. Rents have fallen since their peak in the early 1980s but the rate of decline has begun to slow. Over 60 percent of occupied construction is in the central area.

As a quick and general summary, Malaysia is a market of oversupply and only for the most bullish investor. Since the beginning of 1987 the Malaysian Government has lifted all restrictions on foreign ownership of land. What effect the opening of the property market to foreign investment will have in the future remains unclear. So far most interest has been shown by nearby Asian financial centres.

Kuala Lumpur's citywide average office occupancy rate is about 69 to 70 percent compared with 65 to 70 percent in 1986 - very high by world standards and grossly oversupplied. That determinant of supply and demand is present again.

Now, a look at the Australian market.

Australia: exciting, stable

Exciting in the long term, this is a stable market. Australia's underlying rate of inflation is showing signs of improvement; investment in the manufacturing industry is increasing and there has been an increase in both manufactured exports and in many commodity prices.

The prospect for property is a healthy market with reasonable vacancy rates and more moderate growth in rents and prices - this can be seen as a natural period of consolidation after the rapid increases in the last couple of years which were obviously unsustainable in the long term.

Statistics on office space supply and absorption, and on developments underway and proposed, provide a powerful barometer to the viability of new development in today's markets. Combined with the renewed caution emerging since the Stockmarket Crash, they will result in more careful assessment of schemes and, almost certainly, a smaller quantity of new

space being supplied in the next few years than was expected beforehand. This supply must be seen in the light of a bigger economy capable of absorbing a larger amount of space, the major user of office space [the tertiary or services sector] has seen most growth, already accounting for about 60 percent of gross domestic product. The demand for prestige new buildings in prime locations will continue as Sydney, for example, grows as an international finance centre for the South Pacific.

It has also been shown that the average amount of space per worker is rising, so that the longer term underlying demand for space is upwards. Vacancy factors for new developments have been historically low in most capital city central business districts, down to one percent in Sydney in 1987. In fact the average annual absorption in Sydney CBD between 1980 and 1987 was higher than annual new supply.

Together with the strength of long term demand for new office space, this suggests a pent-up demand in the second half of the 1980s. The takeup of commercial space in 1987, at 75 percent more than the annual average for the previous decade, was the second highest on record after 1978.

Pre-commitments and enquiries everywhere since October have remained high [nearly 60% of new space for 1988 in Sydney has been pre-committed to date]. Based on these supply and absorption figures for Sydney, vacancy rates are expected to rise to about 2.5 percent this year, to between 5-7.5 percent in 1989, and to a worst scenario of 5-10 percent in 1990 compared with 18 percent at the bottom of the 1970s downturn. Vacancy rates in Melbourne are likely to peak in 1990-92 as several landmark projects come to completion there.

This is not a disastrous oversupply. A vacancy rate of 5 percent is regarded by most as an indication of a healthy market that allows for structural movements because it is close to equilibrium. A mature office market such as Manhattan considers 7 to 8 percent to be a normal vacancy rate.

Most records in property sales and development were rewritten in 1987. Activity centre is on the eastern seaboard of Australia, with Sydney and Melbourne clearly in the lead. Industry estimates put the total value of Sydney CBD sales in 1987 at some 2.3 billion dollars - a figure which dwarfs both 1985 and 1986 results of 536 million and 1.1 billion dollars respectively.

On the other side of the coin, Australian suburban shopping centres have become quietly and snugly entrenched in their markets as our CBDs are seeing a new era of major and imaginative retail developments. Major schemes in varying stages of development in city centres include the Myer Centre, Brisbane; the Canberra Centre; Forrest Chase, Perth; Sky Garden and 135 King Street in Sydney.

Let me quickly profile the Myer Centre development, not just because it is one of my company's projects, but mainly because it exemplifies this new trend in CBD retail development worldwide rejuvenation of the city centres. It is the first retail and entertainment complex of its kind in Australia, offering a full line of stock Myer Department Store over five levels; 185 speciality stores; eight cinemas; two taverns; a fantasy and leisure centre; a gourmet hall and a takeaway food court with seating for over 300 people.

The theme floor of fantasy is a first for Australians, and is similar to that in the Edmonton Mall in Canada. Annual turnover for the Centre will be \$250 to 300 million. The Centre will also benefit from being linked into the Brisbane City's public transport network via the new underground bus station, reportedly the world's largest. This station will be the terminus for the city's express routes and will cater for 500 buses and 30,000 people each day.

We have budgeted for an annual rental income of A\$32.9 million from the Myer Centre in its first year. Already, we have projected rentals, plus returns from the large car park totalling about A\$31 million. This means that over 95 percent of the

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Centre by area and about 95 percent of the budgeted annual rental income has been achieved already we anticipate that in the next month or so we will exceed our budgeted rental income for the Centre.

The budgeted yield was seven percent, and the anticipated income excess and firm market could see that drop by about a quarter of a percentage point at completion. The key to successful trading of a retail centre development is the range and quality of the mix of the tenants. Included in the rental commitments I have mentioned is a list of tenants which reads like a roll-call of leading Australian chain retailers.

Finally, to the New Zealand property market land of the long white cloud or long white put option.

New Zealand: a misunderstood market

New Zealand is a somewhat unique market by world standards in that, particularly CBD office buildings, are substantially pre-leased. This, in fact, is a tradition here due to the financier's requirement that this be so, and quite rightly so in a small market.

We must understand though, it is still one of the most unsophisticated markets unfortunately lacking liquidity, depth, quality and some class and professionalism.

While it may have appeared that the development market has been supply driven in the last five years, at no stage, in either Auckland or Wellington's CBDs, has there existed large vacancies. Statistics provided by Jones Lang Wootton have shown the vacancy factor in CBD Auckland and Wellington to be "hovering" between 0 and 0.5 percent. What is more, the forecast vacancy rate for 1988 is less than two percent in both cities.

The impact of the Sharemarket Crash, which has been most severe in New Zealand, I believe will ensure that for the next 12 months at least the market will continue to be demand driven. Developers and financiers will both be seeking to maintain New Zealand's unique traditions few major projects will commence. Specifically, that will involve the developments firstly being very well located to ensure steady growth of rentals and values and, secondly, 60-70 percent of available lettable space be pre-leased.

Furthermore, the trend will be for more pre-sale of developments of any size, or they will be undertaken in joint ventures with profit sharing. This is where we see the Japanese playing a significant part in the course of New Zealand's property development. We welcome them to our shores. We need to strive to understand their requirements and desires better and better.

The cumulative effect of these circumstances, I believe, will be that during 1989 there could be a shortage in the supply of well located CBD property investments. The demand for CBD property has, and will, remain a much sought after investment avenue in New Zealand. Developments deferred or scrapped mean supply and demand may well equate in 1989 and 1990.

Whilst, like all commercial activity in New Zealand during the last six months, few investment decisions have been made, recent evidence suggests that investors are returning to the market, particularly international investors looking for potential bargains.

There is little evidence to date to support a major shift in capitalisation rates...

There is little evidence to date to support a major shift in capitalisation rates, other than valuers taking a more conservative approach than they did pre-crash. Secondary cap rates have

moved out- a normal response to a slow down and lack of confidence.

The movement for CBD properties is not likely to be more than between 0.25 percent and 0.5 percent. My prediction is that this will be short lived. With the contracted supply of property investment opportunities that will result in 1989, we may well in fact see the rate return to pre-crash levels for CBD properties within 18 months, that is the first and second quarters of 1989.

New Zealand commercial property values may not have seen some of the phenomenal growth rates that have occurred in markets like Tokyo and London, but historically the market has a track record of consistent growth.

Given that, of the property investment markets throughout the world, it probably has one of the lowest occupancy costs of any and yet, also has one of the lowest vacancy factors and consistent growth figures, I believe that it has great potential for maintaining a growth in values that will prove to be attractive to international investors.

Investments from offshore will also improve the very necessary element of liquidity in the market. With a declining inflation to 6-7 percent and interest rates predicted to fall sharply, the yield gap, which has been a deterrent to international property investors, will soon be a fraction of that which has operated previously.

I now want to turn to another area of great activity, the imagination of developers is, as it must be, paralleled with fresh thinking in the financing of these properties.

Development Financing

It is an essential part of property development and investment worldwide. The development of financial engineering and new financing and structuring techniques will, in my opinion, have a major effect on the course of development worldwide over the coming decade. These trends are an attempt by both borrowers and lenders to match each others wishes.

As with all forms of asset based finance the peculiarities of the particular asset generates special problems and challenges when arranging the funding to support that asset. Property financing is no exception to this general rule.

The trend I foresee is for a sharing of the risks and the various elements of reward...

The trend I foresee is for a sharing of the risks and the various elements of rewards in property between investors with different aims - growth vs income vs low risk vs development.

Now, let's have a look at some *innovative financing techniques*.

Unitisation. Unitisation has replaced sale and lease-back as one of the main forms of financing property acquisitions in Australia. Unitisation can also be used to finance the development phase.

Unitisation is a term used to describe a process whereby the ownership of income and growth from a single major property is divided into many ownership titles which are readily transferable without the transfer of the land title.

Another funding technique is *securitisation*. Securitisation has become the buzz word of the late 1980s. Its applicability to property has been very limited although a number of securitised issues have been undertaken in Europe and the United States. The benefits of securitisation are two-fold. First, a properly structured securitised issue will enable the company to finance the asset off balance sheet. The revised accounting standards

contained in SSAP8 here in NZ reconfirm the treatment of a truly securitised issue as a legitimate off balance sheet structure.

The second benefit is that the issuer retains control over the disposition of that asset. As a consequence, benefits flowing from the growth in the value of the asset are retained.

The process of securitisation creates an asset-backed security which will generally be constituted as either a "Pass Through" or "Pay Through" security. Briefly, a Pass Through security involves the investor or holder purchasing a legal or equitable interest in the securitised asset, this interest is commonly represented by a Pass Through certificate which may be traded. A Pay Through security involves an investor or holder purchasing bonds or notes secured over a pool of securitised assets.

At the moment, Chase Corporation is finalising the details relating to the establishment of a securitised property holding structure. The structure will enable Chase to securitise approximately NZ\$140 million of property assets and issue Pay Through securities to an aggregate total of NZ\$100 million the first of many in this part of the world.

This will enable us to; hold the property assets off balance sheet; retain effective control over the sale of that property; limit Chase's direct exposure to the New Zealand property market by no recourse funding and; allow us to take advantage of declining interest rates in New Zealand.

Other developing trends in financing considerations include: low start mortgages, growth sharing mortgages, loans in low interest currencies protected by currency options, and backend loaded mortgages, not to mention put options -

lowkey in property terms. As a general commentary on future financing trends, the positive consequence of the October Stockmarket Crash has been a more aggressive investment in assets through the debt markets. So, while it may have made it more difficult for companies to raise equity finance, this in itself has encouraged borrowers to seek financing through off balance sheet structures to protect the base gearing of their consolidated balance sheet and investors turn to debt instruments.

In the long term this may prove a good trend, no recourse funding essential in Australia and New Zealand if our investment and development markets are to mature to international standards. Appraisers, have their part to play. No recourse funding to some degree relies on their analysis of the project but please remember the developer.

The International Investment Market, as always, is constantly changing with many factors impacting, with different intensities, in regional markets. Two things spring to mind. The October Stockmarket Crash has had little direct impact on the International Property Market except to underscore its strength. There are opportunities around. The second conclusion that can be drawn is that Government intervention or regulation, of any kind, distorts the marketplace and often has the opposite effect of that intended by Governments. Be wary of regulated markets for the long term.

I hope that I have provided some insight into future trends, I conclude with a reminder that: *during times of uncertainty, predicting the future becomes particularly fashionable and we all have a go at it!*

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Investing & Financing On The Farm - Working Capital Considerations

By R H Juchau

The modern farm faces many challenges in the current economy where finance and commodity markets have had a number of protective and restrictive regulations removed. More than ever modern farmers need to have effective financial management policies in place to ensure that their investing and financing practices enable them to deal with uncertainty and, at the same time, to position their operations to maximise the market value of their farming business..

The following discussion on working capital management provides a number of basic observations from financial management on investigating and financing practices. These can assist in dealing with the volatilities of markets and can contribute to the profit seeking goals of the farm enterprise.

Working capital is a farm's investment in short-term assets -cash, short-term investments, accounts receivable and inventories. Net working capital management encompasses both current assets and current liabilities and has two main functions.

1. To accommodate changes in the farm's level of trading activity caused by seasonal cyclical and random factors.
2. To contribute to maximising the market value of the farm.

Working capital policy involves two basic questions:

1. What is the appropriate investment in current assets both in total and by specific accounts?
2. How should the required level of current assets be financed?

A. Current assets and cash cycle

Current asset investment requires estimates of the effects of such investments on profits. It is different to fixed asset investment in two respects:

1. Increasing the farm's current assets, while holding constant expected production and sales, but it may reduce the overall return on assets.
2. Although the levels of both fixed and current asset holdings are related to expected sales, only current assets can be adjusted to actual sales in short run: hence, adjustments to short run fluctuations in demand lie in the domain of working capital management.

The level and nature of a farm's current assets depend on the number and variety of enterprises on the farm, their operating cycle, the levels of sales, and operating expenses and management policy. Within a farm's normal operating cycle seasonal sales and expense patterns cause the level of current assets to vary. Credit and inventory policies and the efficiency of current asset management will affect a farm's working capital needs. For example, a conservative farm may maintain a high level of inventory (trading livestock chemicals, etc) to overcome the risk of not acquiring replacement inventory in time. A more aggressive farm, on the other hand, may function with a much lower inventory investment and bear this risk.

Current assets are required to provide the liquidity necessary to allow a farm's long term assets to generate returns. Cash flows associated with long term investments are uncertain and irregular, and it is the unstable nature of the cash flows that makes working capital necessary. If cash flows were certain, less work-

*Professor Roger
Juchau's Chair-
man of the Board
of Commerce at
Lincoln College*

ing capital would be required. Current assets act as a buffer between cash outflows for operating expenses and the cash receipts generated by sales.

Operating Cash Conversion cycle

A farm's operating cash flow problem can be described in terms of the operating cash conversion cycle.

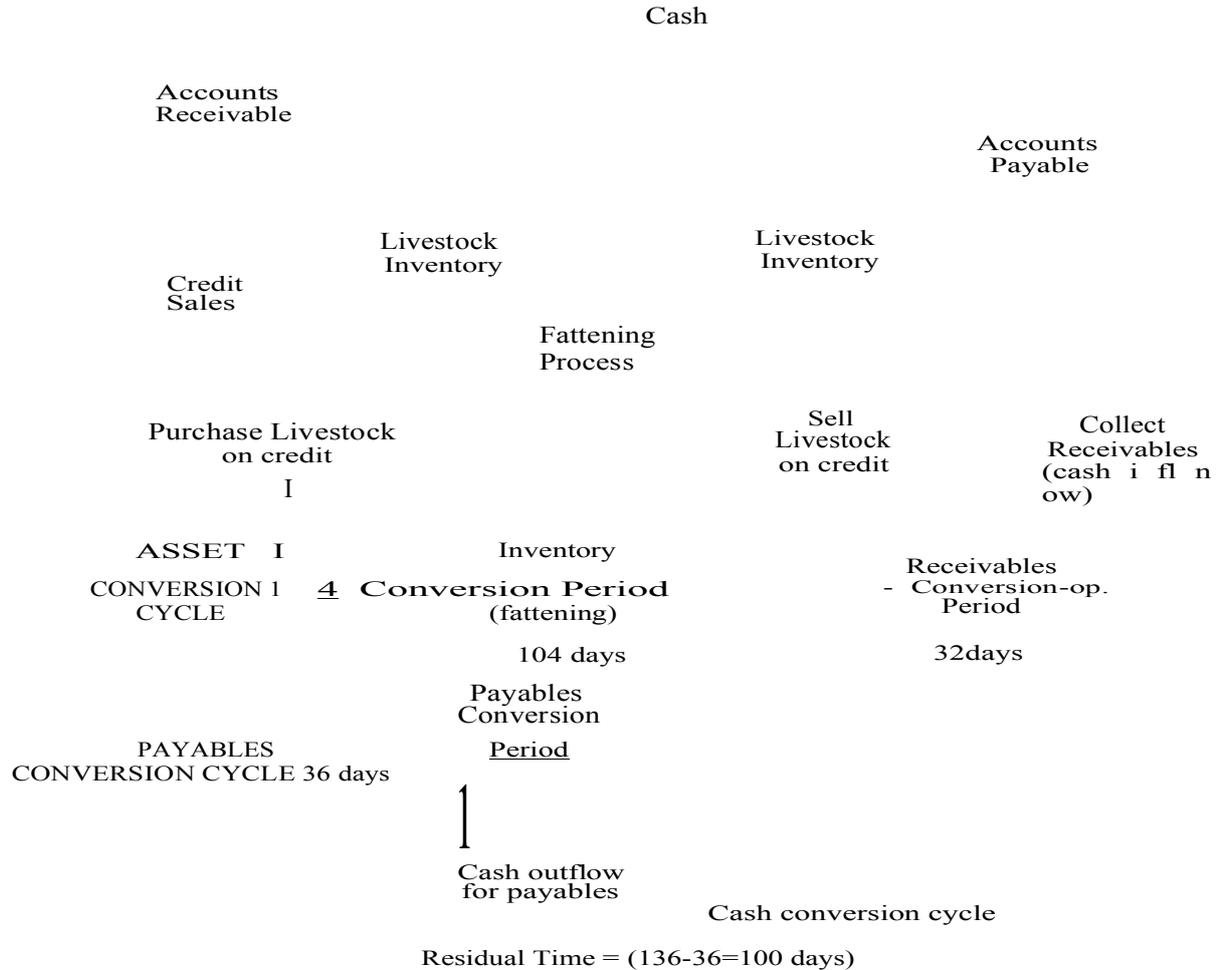
The cycle highlights the fact that current asset and current liability accounts have different life cycles and re transformed into cash flows at different rates. Referring to Figure 1(after Rao), assume that an investment in livestock facilities is used to expand livestock trading activity. Before cash inflows from this expenditure are received, cash outflows for labour and materials must be incurred to fatten the livestock. This product may remain as inventory for months before it is sold. And, if its is sold on credit, the original cash expenditures will remain tied up in accounts receivable. Only when payment occurs does the farm finally receive a cash inflow from its fixed investment. The imbalance in cash outflows and inflows necessitates current-asset investment.

In many farming contexts, the absence of an accrual accounting system frequently means that cash conversion problems are not formally recognised. Although payables and receivables exist, they are not captured by the cash accounting system. Under such circumstances cash problems cannot be quickly identified and managed in a timely fashion.

Residual time in figure 1 indicates that there is a deficiency in cash flow equal to 100 sales days and must be financed or a liquidity crisis will occur after 36 days. One solution is to use spontaneous sources of financing further by deferring payments to trade creditors. Most farms, however, are limited in the extent to which they can do this without adversely affecting their credit standing. One typical solution is to arrange further short term credit, such as a bank loan, to finance the remaining current assets. This financing need could be reduced if farmers were able to use current assets more efficiently (e.g. by increasing

FIGURE 1

Cash Collections



asset turnover.

Where the asset conversion period becomes greater than 136 days without simultaneously extending the payables conversion period, additional financing over an even longer period would be required. Therefore, a longer cycle will reflect a greater investment in current assets and an increase in the need to finance these investments with current liabilities.

Attention to reducing the cycle is critical for farms where the production process is protracted. Specialising production (e.g. fattening only) and diversifying production activity (livestock, grain, market gardens) are tactics used to reduce the average length of the cycle. Just in time strategies (supply, distribution, delivery) can also materially reduce the asset conversion period. These latter strategies require excellent trading relationships with suppliers, customers, transportation and marketing operators. Just in time supply has been successfully used by small aggressive stock and station agents who have scheduled and coordinated farm clients to obtain supply of farm inputs at the appropriate time in the production cycle.

Further elaboration of the cash cycle and its relation to other cash flows on the farm are shown in Appendix.

Fluctuating Current Assets

Each current asset has a base level and this level of investment fluctuates with the rate of cash inflow and outflow. At any point in time, a minimum level of investment will always be needed if the farm is to continue its operations. This continuous level of current assets is referred to as permanent current assets. A portion of the current assets, however, will be temporary and will fluctuate over the farm's operating cycle. The degree of fluctuation will depend on the rate of change in sales and expenses.

The division between temporary and permanently current assets has important implications for deciding a farm's working capital policy.

B Risk and Return in Decision Making

The uncertainty and irregularity of a farm's cash inflows requires a margin of safety in liquidity. This margin of safety can be provided by increasing the proportion of liquid assets and/or lengthening the maturity schedule of its financing sources. Both strategies affect liquidity risk and returns.

More current assets lead to greater liquidity but normally represent lower-yielding investments. Long term debt usually has a higher explicit cost but lower risk than does short term debt, which involves some debt sources (trade and other creditors) with zero interest cost.

A main consideration in developing an overall working capital policy is the risk-return trade-off associated with:

1. The appropriate mix between current and fixed assets.
2. The appropriate mix between short and long term financing required to fund the current asset investments.

Asset Mix Decision

Table 1(after Rao) shows a farm with two different working capital plans. They differ only with regard to the level of current assets.

The higher investment in current assets is financed by owners' equity (this allows reported income to be unaffected by how the investment is financed). Referring to Table 1 (over page), it can be seen that as the percentage of total assets invested in current assets decreased from 33.3% to 20% the various measures of liquidity indicate that the farm becomes less liquid. The net working capital position falls from \$30,000 to \$10,000

TABLE 1

	Conservative Asset Policy (Lower Risk: Lower Return and a ance	Aggressive Asset Policy Higher Risk: Higher Return ee et ects
Current assets and trading livestock	\$40,000	\$20,000
Fixed assets & breeding livestock	<u>\$80,000</u>	<u>\$80,000</u>
Total	<u>\$120,000</u>	<u>\$100,000</u>
Current liabilities	\$10,000	\$10,000
Long term debt	\$30,000	\$30,000
Equity	\$80,000	\$60,000
Total	<u>\$120,000</u>	<u>\$100,000</u>
	Income statement effects	
Net income	\$30,000	\$30,000
	Decreasing liquidity	
1. Per cent current assets	33.3	20.0
2. Net working capital	\$30,000	\$10,000
3. Current ratio	4:1	2:1
	Increasing Profitability	
Rate of return on equity (book value)	37.5%	50.5%

TABLE 2

	Conservative Financing Policy (Higher Risk: Lower Return)	Aggressive Financing Policy (Higher Risk: Higher Return)
	Balance Sheet Effects	
Current assets and trading livestock	\$40,000	\$20,000
Fixed assets & breeding livestock	<u>\$80,000</u>	<u>\$80,000</u>
Total	<u>\$120,000</u>	<u>\$100,000</u>
Accounts Payable	\$10,000	\$25,000
Loan Payable bank (20%)	<u>0</u>	<u>15,000</u>
Current liabilities	\$10,000	\$10,000
Long term debt (16%)	\$30,000	0
Equity	<u>\$80,000</u>	<u>\$80,000</u>
Total	<u>\$120,000</u>	<u>\$120,000</u>
	Income statement effect	
Net operating income (NOI)	\$64,800	\$64,800
Less: Interest expenses	<u>\$4,800</u>	<u>\$3,000</u>
Taxable Income	\$60,000	\$61,800
Less: Taxes (30%)	<u>\$18,000</u>	<u>\$18,540</u>
Net Income	<u>\$42,000</u>	<u>\$43,260</u>
	Decreasing liquidity	
1. Per cent current assets	33.3	33.3
2. Net working capital	\$30,000	0
3. Current ratio	4:1	1:1
	Increasing Profitability	
Rate of return on equity (book value)	65.0%	68.0%

while the current ratio drops from 4:1 to 2:1 providing a higher risk of illiquidity because net working capital and the current ratio are relatively lower.

The conservative policy provides a 37.5% return on equity, while a more aggressive stance gives a 50% return on equity. Therefore, a relatively higher level of current assets produces a favourable effect on liquidity but only at the expense of reducing the rate of return on equity.

Trends in asset management have also concentrated on the problem of ownership of and level of investment in fixed assets.

The challenge is to use (not necessarily own) assets to generate cash flows.

Many balance sheets have literally shrunk as firms rent, lease, hire, co-venture production assets and pledge cash flow not assets as collateral. Such strategies impact on return on equity but reduce risk exposure to costly assets that are frequently subject to low and/or sporadic utilisation. These strategies have been employed by many farmers who see great advantages in low commitments to asset ownership. Frequently, the implied rate of interest in asset leasing, renting or hiring deals are below rates currently offered in the market and help to reduce funding costs.

Current asset management, as previously noted, has benefitted from just in time strategies which have lowered investments in receivables and inventories. More efficient trading relationships with produce agents and dealers have also improved the cash conversion cycle.

Finance Mix Decision

A farm's overall working capital policy is also determined by the mix of short and long term financing used to finance current assets. Normally, the cost of using short term credit is less than the cost of long term debt. Trade credit often has no explicit cost and the interest rate on short term debt such as bank loans may be less than the interest rate on long term debt. The level of short and long term rates will depend on market movements of interest rates - recent times have seen short term rates higher than long term rates.

More reliance on short-term debt and supplier credit has a greater risk of illiquidity. There is always the possibility that a farm may not be able to refinance its short term debt and/or access further credit. Also, short term and penalty interest rates vary more than long term rates and, therefore, cash outflows for interest expenses will be more variable.

Table 2 (after Rao) shows the effect of the farm's financing mix on its risk and returns, using the conservative asset policy in Table 1 but holding constant the investment decision (ie. the percentage of current assets to total assets is fixed).

As Table 2 shows, the conservative financing policy uses 16% long term debt to support the current-asset investment, while the aggressive policy calls for an increase in short term bank loans (20%) and more supplier credit. The table indicates that the more conservative policy has a higher level of liquidity, as evidenced by a higher net working capital position (\$30,000) and current ratio (4:1). However, because this policy uses more costly (overall) debt, net income is less and hence return on equity is lower than under the aggressive policy. The aggressive approach exposes the farm to loan and credit renewal problems and

the risk of having interest expense rise quickly if interest rates rise.

The frequent financing problem faced by farms is that their level of debt (leverage) is inappropriate to the riskiness of the assets commonly employed in farm enterprises. The variability of cash flow from these assets cannot sustain high leverage positions. Comparable operations in servicing and manufacturing (ie. for the same risk class of assets) reveal leverage positions of 30%, not 30-50% commonly found in New Zealand farms. A quick test to establish whether a farm's finance structure is

sustainable is to compare its ratio performance to the following ratios which indicate a highly rated commercial business operator (as set by a credit-rating agency).

Interest Coverage Ratio	5 times
Fixed Charge Coverage Ratio	3.5 times
Cash Flow/Total Debt	55%
Long Term Debt/Market Value	25%
Cash Flow/Long Term Debt	65%

In planning asset and financing structures, farm managers may reference such indices and plan to take actions to achieve ratios which induce more favourable terms for borrowings.

C Financing Tactics and Working Capital Policies

The following policies illustrate some conventional ways of looking at financing working capital and has been cast in a farm context.

Matching Policy

Figure 2 shows the outline of the matching policy.

Temporary current assets are funded by spontaneous sources of financing (such as payables, creditors) and short term borrowings; permanent current assets and fixed assets are financed by long term debt and equity.

The matching policy assumes unrealistically that the cash flow pattern of a farm is known with certainty. It also assumes that farmers can readily predict at any time the life cycle of all assets. Compounding the problem are the uncertain borrowing costs and the possibility that adequate credit may not be available when needed. The operating conditions of farms and their markets make this policy virtually unattainable.

Aggressive Policy

An aggressive policy occurs where current liabilities finance temporary, and part or all of permanent current assets (Figure 3). This strategy may increase the risk of illiquidity where the farm has to refinance its short term loans (at unpredictable interest rates) and gain access to further lines of trade credit. Internal or external events can quickly bring about a liquidity crisis by causing adverse movements in cash flows.

Conservative Policy

The impracticalities of implementing the previous policies cause prudent farmers to opt for a compromise position - termed a conservative policy. A farm adopting this policy balances the trade-off between risk and profitability in a manner consistent with its attitude toward bearing risk.

As illustrated in Figure 4, long term financing is used to support permanent current assets and part of the temporary current assets. Short-term credit is used to cover peak seasonal needs. This implies that as any seasonal borrowings are repaid, surplus funds are invested in marketable securities.

This policy has the advantage of providing a margin of safety. If temporary need for current assets exceed management's expectations, the farm will still be able to use unused short term lines of credit to fund them.

Similarly, if the contraction of current assets should be less than expected, short term loan payments could still be met but less surplus cash would be available for investment in marketable securities. A conservative policy will demand more time and effort in monitoring and adjusting the mixes of finance and assets.

For farms adopting a sustainable commercial approach, a conservative policy for risky assets would require long term financing to be largely composed of farmer's equity. The long term debt component would need to be limited to 25% to 30% of the market value of the farm with the associated interest

FIGURE 2 (after Weston and Brigham for figure 3 & 4)

Dollars

Short-term
Financing

Long-term
Debt plus
Equity Capital

Dollars

FIGURE 3

Short-term
Financing

Long-term
Debt plus
Equity Capital

1 2 3 4 5 6 7 8
Time Period

FIGURE 4

Dollars

Short-term
Financing Requirements
I
Marketable
Securities

Long-term
Debt plus
Equity Capital

1 2 3 4 5 6 7 8
Time Period

coverage ratio around 3-4 times.

D Concluding Comments

The observations above offer insights into the risk - profitability trade-off inherent in a range of different farming investing and financing decisions.

The greater the uncertainty regarding the size and timing of cash flows associated with sales, the higher the level of working capital. It was also seen that the cash conversion cycle will

influence a farm's working capital policy and the degree of reliance on permanent financing.

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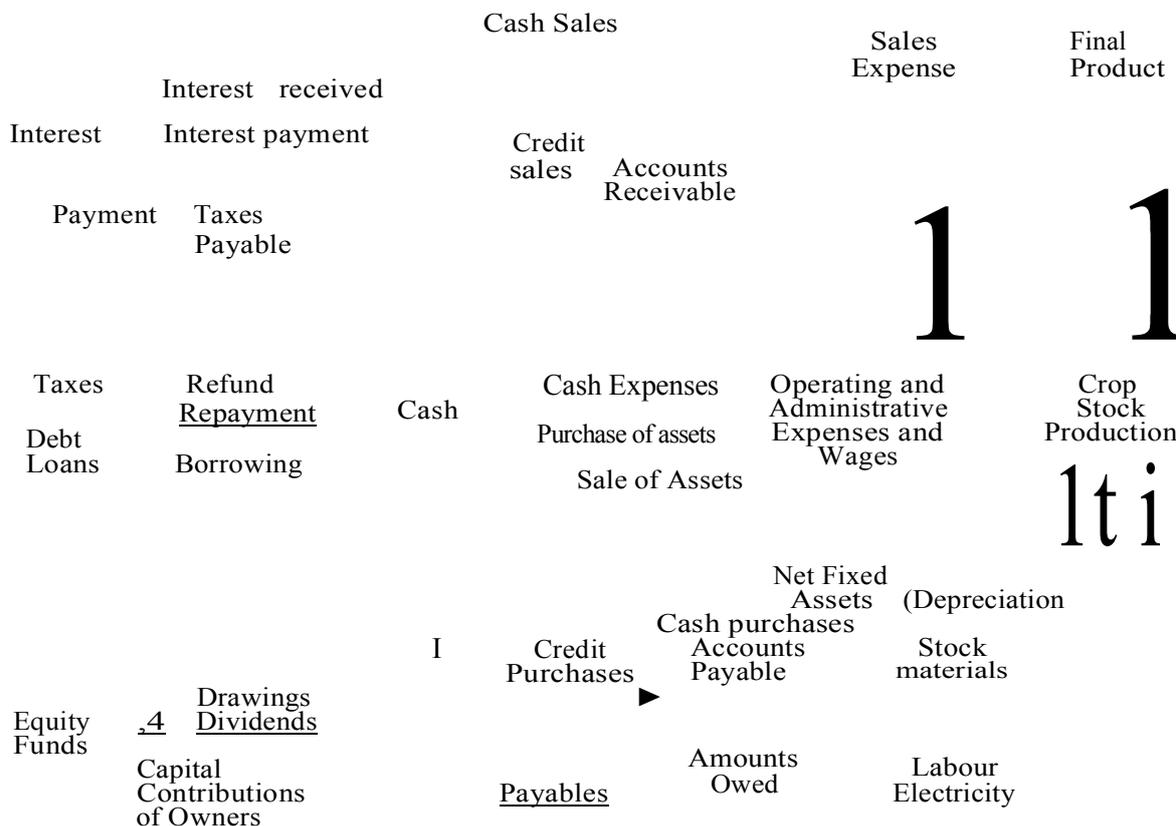
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APPENDIX: Flow of Funds Through the Farm

Financial and Legal Flows

Operating Flows



CASES RECEIVED

Notice of cases received are given for members' information. They will be printed in The New Zealand Valuers' Journal as space permits and normally in date sequence.

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CASES NOTED

IN THE MAORI APPELLATE COURT OF NEW ZEALAND
TAIRAWHITI DISTRICT

APPEAL BY JOSEPHINE TE OHAKI MARAKI from a decision of the Maori Land Court dated 29th October 1986 upon hearing an application by Mr K.M.Dewes

CORAM Judges H.K.Hingston (Presiding), H.B. Marumaru and A.D.Spencer

COUNSEL: Mr David Rangitauira for the Respondent
Mr Ron Barber for the Appellant

HEARING: 23rd February 1988 at Gisborne

In respect of the question of jurisdiction raised by Mr Rangitauira, we agree that this matter is in line with the case of *In Re Torere 34A & Anor, Kingi v Rika* (1983) 6 Waiariki ACMB 322 and therefore conclude that we have jurisdiction.

Secondly, this Court is of the view that in electing to deal with the respondents application before that of the applicant's, the lower court ignored the equities and applied wrong principles.

As we consider the application of Mrs Maraki being first in time and she being an owner in A 14B block whereas Mr Dewes was not, her applications should have had precedence. If the Court below had proceeded as we believe it should have, Mrs Maraki's application would have been finally disposed of before proceeding with that of Mr Dewes.

This being our finding, we direct a rehearing of this application pursuant to S.45(1)(e) of the Maori Affairs Act 1953 and that this application not be so reheard until such time as Mrs Maraki's application has been finally disposed of.

We are of the view that it would be preferable for both applications to be heard by another Judge having regard to the Judge in this case being involved in suggested compromise outside the contemplation of both parties.

The Registrar is directed to retain the \$200 security for preparation of record and refund the security for costs of \$300 to the appellant

APPEAL BY FLETCHER DEVELOPMENT AND CONSTRUCTION LIMITED against an order made on the 15th day of July 1987 determining that the appellant did not in law and equity have any right title estate or interest in the land.

PRESENT: Judges R M Russell (Presiding), A G McHugh and A D Spencer.

COUNSEL: L McEntegart for the Appellant
G R Withers for the Maori Trustee

PLACE: Rotorua

HEARING: 18th February 1988

DECISION: 18th February 1988

DECISION.

It is the finding of this Appellate Court that, for reasons that will be given later, the order of the lower Court dated 15th July 1987 was wrong and should be revoked, and an order under s.30(1)(a)/53 that Fletcher Development and Construction Limited is the registered proprietor of a lien under Lien H724956 against the title to the land should be substituted. The question of the validity of the lien is a matter for the High Court. As there are proceedings already before the high Court, there is no need for a case to be stated to that Court. The question of costs is reserved. Counsel may file written submissions in the Waiariki registry within 14 days.

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