THE NEW ZEALAND VALUERS' JOURNAL

SEPTEMBER 1990

page

CELEBRATING THE NATION'S 150 YEARS

NEW ZEALAND INSTITUTE OF VALUERS

Incorporated by Act of Parliament

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1938-1940 N H Mackie, Palmerston North
1940-1943 G B Osmond, Auckland
1943-1947 A W A Sweetman, Auckland
1947-1949 O F Baker, Christchurch
1949-1950-J A Wilson, Dunedin
1950-1951- O Monrad, Palmerston North
1951-1952-L E Brooker, Wellington
1952-1953 L A McAlister, Wellington
1953-1954 W G Lyons, Palmerston North
1954-1955 S E Bennett, Auckland
1955-1957 R J Maclachlan, Wellington
1957-1958 V W Cox, Napier
1958-1960 G C R Green, Dunedin
1960-1962 J W Gellatly, Wellington
1962-1964 S Morris Jones, Wellington
1964-1966-M B Cooke, Christchurch
1966-1968 D G Morrison, Whangarei
1968-1970 A R Wilson, Napier
1970-1971-J M Harcourt, Wellington
1971-1974 R S Gardner, Auckland
1974-1976 G M Niederer, Invercargill
1976-1977 L M Sole, Rotorua
1977-1978 E J Babe, Wellington
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1979-1981 - P E Tierney, Tauranga
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S Morris Jones (1968)
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The New Zealand VALUERS' JOURNAL

SEPTEMBER 1990

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 (1990) N.Z.V.J. September page.

Contents

Articles

5

Page no.

Editorial Comment

Proposed Guidance Note for Valuing Residential Properties

The recent release by the New Zealand Institute of Valuers of a proposed Guidance Note for the valuation and inspection of residential properties is considered to be very appropriate and timely as it will address a problem expressed in the Editorial Comment published in the September 1989 issue of *The New Zealand Valuers' Journal.*

That editorial comment focused on the growing demand for short valuation reports and the impression that these reports could indicate a lowering of professional standards by valuers. The brief report format could lead to an assumption that the research and analysis applied to a valuation has also been similarly brief. The references to the Code of Ethics in the editorial were, however, partly inaccurate as the Guidance Notes on Professional Practice for Valuation and Reporting were completely overlooked.

The proposed Guidance Note for the valuation and inspection of residential properties, if and when adopted, will provide valuers with clear guidelines for the procedures and standards that should be adhered to when valuing residential properties. The proposed Guidance Note will also serve a second and equally important purpose in that they will state clearly to recipients of valuation reports what factors and standards have been taken into account in making the valuation and what factors have not been included and should not be assumed to be included.

The proposed Guidance Note has been published in a Exposure Draft by the Standards Committee of the New Zealand Institute of Valuers and has been drafted by Brian Hilson, registered valuer of Robertson Young Telfer at Hamilton from the Guidance Note adopted by the Royal Institute of Chartered Surveyors (RICS) in Great Britain. The Committee invites comments on the proposed Guidance Note from all valuers and other interested parties. It is intended that the Guidance Note, if and when adopted, will become effective from 1 January 1991.

The proposed Guidance Note provides that for all residential properties a valuer's role is to advise the client as to the Open Market Value at the date of inspection or at any specified past date to advise the client as to the nature of the property and any factors likely to materially affects its value, and if required by the client to provide an assessment of the estimated current reinstatement cost of the residential building and other associated buildings and improvements.

Under the proposed Guidance Note, the valuer must exercise judgement as to what parts of the property should be inspected to make the valuation and where an inspection of the main building is considered necessary both the exterior and interior should be inspected and identification made of the services supplied to and available to the property, but testing of those services is not required to be undertaken. Outbuildings are also to be inspected and the site boundaries and general condition of driveways, paths, retaining walls and the proximity of trees are to be established only to the extent that they are likely to affect the value of the property.

The nature, use and apparent state of repair of adjoining properties are also to be considered but only to the extent that they materially affect the value of the subject property. Some additional requirements apply to the inspection of residential flats or units which are part of a larger building or group of related buildings. Outbuildings on the property including garages, carports, other buildings and structures attached to the main building will also be included in the inspection.

The proposed Guidance Note requires the valuer to supply the client with a written valuation report unless the client requests that a report not be completed. A true copy of the valuation report and notes of the valuer's workings should be retained by the valuer for a reasonable period. The valuation report may be in a prescribed form or narrative style.

If the valuer, when making the valuation, suspects that hidden defects exist which could have a material affect on the value of the property then the valuer should advise the client that further investigation be carried out before the valuation is completed. If a full inspection of the property cannot be carried out, this should be stated in the report. Other matters to be stated in the report include circumstances where the valuer has relied on information from other sources, where deficiencies in the state of repair of buildings and or the management or maintenance of buildings which materially affect the valuation, and where the valuation is being assessed from plans and specifications.

Any matters which may affect the value of the property as disclosed by a current copy of the Certificate of Title, lease or other document which should be inspected by the valuer, should also be stated in the report.

In completing the valuation, unless the valuer states otherwise, it is assumed that the value is assessed on the basis of vacant possession, that statutory approvals have been obtained for all buildings and additions, that corrrect materials and construction methods have been used, that there are no unusual restrictions applying to the property except those disclosed on a Certificate of Title, that the property is connected to main services which are available and the property has legal access to a public street.

The relevant factors to be taken into account in the valuation are the tenure of the interest being valued, the physical features of the property, the nature and condition of the improvements and any detrimental factors affecting the property. A definition of Open Market Value is included in the proposed Guidance Note.

Upon the adoption of the Guidance Note, every valuer will be required to state that each residential valuation is made in accordance with the Guidance Note.

If the valuer considers that there are special circumstances which render it inappropriate for the valuation to be made wholly in accordance with the Guidance Note then a clear statement to that effect will have to be given together with reasons for the departure from the Guidance Note.

Your response to the proposed Guidance Note will be welcomed by the Standards Committee of the New Zealand Institute of Valuers.

Trevor Croot.

Membership

List of Fellows of the New Zealand Institute of Valuers

The list of living Fellows published in the March Issue of the New Zealand Valuers Journal was incorrect in many instances, particularly in respect to date of elevation, and a corrected list is now published. Included with this list are Fellows who have been awarded Life Membership.

Allan K VI	1986
Archbold D J 0 !>``	1988
A rmstorng D J	1984
Ashby I H	1975
Baker D H	1972
Baker R K	1969
Barraclough C TG	1962
B jrrat-Boyes D B C	1972
Bartosh W E	1978
Bell J M	1970
Bernau T J	1985
Blincoe H J	1990
Boswell W G	1953
Briscoe J W	1974
Brittenden G H	1945
Bryant A	1970
Burns G E	1973
Calderwood AR	1975
Campbell S 0	1973
CaselbergA E	1947
Chamberlain C N	1990
Chappell R J	1987
Cleghorn W A	1986
Cook P J	1989
CookePG	1973
Cooper E C	1965
Cooper K J	1981
,Crawford JM	1971
Croker CH	1979
Croot T J	1989
Darroch N K	1985
Davies W G	1976
Dawson G S	1976
De Lautour B	*1975*
Dodd H M	1963
Donaldson R M	1975
Elsmore SW	1965
Englebrecht R L	1990
Farrell J P	1970
Faulls A P	1966
Findlater M J	1977
'Fitzgerald E T	1989
Flux P A	1968
Ford A K	1972
Foster R D	1985
Foster G T	1986
:Fowler R F	1990
Fright R H	1981
Gamby ME L	1986
Gardiner N F	1981
Gardner R S	1960
Garton E H	1948
Gibson A E	1976
Gibson J G	*1977*
Glengarry A B	1981
Goldfinch P J	1987
Graves J W	1980
GreigG A	1978
Gribble I W	1988
Grinlinton BG	1985
Guy AD	1987
Hadcroft B H	1975
Hallinan R E	1984
Halstead G A	1985
Hanna M R	1977
Harrington W 0	1981
Harris A R	1946
Hillary N G	1970
Holmes P R	1966
Horsley G J	1983
Jansen S R	1968
Jefferies R L	1979
Jenkin N C	1962
Jensen R H	1988
Kingston J R	1973
Kirkcaldie G	1989
Laing A P	1982
Larmer J P	1984
Livingstone R R N	1970
Long A D	1970
Lord R	1976
Lugton D B	1986 44
Lyall I W	1983
MacPherson J 0	1965
Mahoney P J	1982
Marshall B A	1975
McDonald HF	1987
McDonald MS	1949
McGlone V P	1955
McNabb R S	1951
McSkimmingA	1990
Millar N M	1980
Minchin R W H	1980
Molesworth T F	1972
MondsJ F	1972
Moore G S	1965
Morgan JP	1977
Morice S D	1990
Nathan M J	1978
Ng T G	1983
Oldfield J H	1987
Omundsen J E	1948
Osborne G	1974
Ower DK	1970
Ozich S	1948
Pearse H C H	1947
Pedrotti A W	1967
Poole B G A	1976
Powdrell J D	1960
Pyne A F	1959
Ralston S WA	1974
Rawcliffe T	1985
Reid C G	1967
Riley R G	1982
Robertson B J	1976
Robinson A N	1987
Robinson P R	1978
Roper G C	1983
Rowse G W	1961
Sale V S	1984
Sceats ER	1966
Scholefield G W H	1989
Sharp G H	1968
Sharp J R	1988
Smith 0 B	1969
Sole L M	1968
Speedy R D	1976
Stabler J A	1988
Stewart A G	1986
Svensen M L	1978
Tabor G	1976
Teller I R	1985
Tetzner S A	1950
Tierney P E	1976
Veale J B H	1980
Wall JNB	1969
Wallace R J	1960
Watters J A	1987
Whale G E	1986
Wilson A R	1965
Yarnton G K	1965
Young R P	1976

LIFE FELLOW MEMBERS

Babe E J	1982
Cooke MB	1970
Jones S M	1968
Maclachlan R J	1970
Mander M R	1985
McAlister A L	1988
McGough R M	1987
Morrison D G	1976
Speedy S L	19

Institute of Plant & Machinery Valuers Incorporated

Valuers of plant and machinery, who up until 10 years ago used to do the job as a sideline, now have their own New Zealand Institute of Plant and Machinery Valuers.

New Zealand's small industrial base meant that unlike most other countries, plant and machinery valuation here was a part-time business.

But New Zealand's economic development in the last 10 to 15 years meant many more New Zealanders acquired plant and machinery valuation qualifications to the point where an independent institute representing their interests became feasible.

The Institute, which covers about 30 members at present but hopes to have up to 100, was incorporated in a small ceremony at the New Zealand Institute of Valuers offices in Wellington on 22 June. The documents of incorporation were signed by 15 founding members. Mr Paul Agius, who has spent the last two years working toward establishment of the Institute, was elected President. He said: "The new Institute looks forward to representing the growing interests of plant and machinery valuers as an independent organisation in the near future."

The Institute has been 18 months to two years in the making. The need for a separate Institute arose when it became apparent many New Zealanders who had trained as plant and machinery valuers and as engineers overseas had returned home to find no individual organisation represented their needs.

New Zealand industry had also become more sophisticated and aware of the need for more accurate valuations of plant and machinery for the preparation of balance sheets, company flotations and receiverships, taxation, financing, sale by private treaty or auction, dissolutions of partnerships, accounting, re-financing, probate and matrimonial property disputes.

Often as much as 70-80 per cent of the net tangible asset backing of business enterprises are represented by the plant and machinery. Several years ago some land and building valuation and consulting engineering companies took seriously the increased demand for plant and machinery valuation. As a self regulation measure, plant and machinery valuers have now banded together to form the new Institute sponsored by the New Zealand Institute of Val';ers.

Plant and machinery valuers are associated to the NZIV as affiliated members. The Institute will have direct access to NZIV technical information and secretarial assistance. However, it will operate as a separate organisation with its own annual meeting, officers, regional activities, and technical publications.

Mr Agius commented: "The establishment of the Institute comes as a time of exciting new developments in the property degree at Auckland University. Massey University has included units in plant and machinery in their business diploma course."

In the long term, the IPMV will promote the further establishment of a university course to cater for young people wanting to enter the profession. "This is a recognition of the growing importance of our particular expertise in the academic sphere and in the valuation industry," said Mr Agius.

The main aims of the IPMV are:

- to ensure that members give the highest standard of service to the public;
- to provide opportunities for the acquisition and dissemination of knowledge on valuing of plant and machinery;
- to promote, support or oppose legislative or other measures affecting the valuing of plant and machinery or the business of any of the Institute's members;
- to protect and promote the interests of the profession of valuing and the interests of the public in relation to valuation of plant and machinery and kindred subjects.

Initially there will be "member" and "probationary member" membership. Plant and machinery valuers also provide significant assistance to the accounting profession in providing reliable asset registers. A reliable asset register is an indispensable financial management tool.

"The establishment of the Institute is a milestone for the valuation industry in New Zealand, " said Mr Agius. "It recognises the increased sophistication of industry here and the need to maintain high and consistent valuation standards." A

Appraisal and Professional Practice in Australia

by Graeme Martin,
President, Australian Institute of Valuers and Land Administrators

Valuation practice in Australia is under the microscope. We have had an over heated economy and with overseas investment, mainly from Japan, along our eastern seaboard, the real estate market has been brought to a peak both in terms of price and development activity. We have more recently experienced a contraction of the market as the direct effect of high interest rates, falling prices and lack of demand for real estate developments. The problem has been compounded by the banks calling in loans and not being prepared, under normal circumstances, to lend on real estate developments.

Graeme Martin

The valuation profession is facing criticism due to properties not realising valuation on sales. In some instances the criticism is justified but there are also many situations where the reduction in value has been due to the fall in the market and any action against the valuer is the last chance by the lender of recouping the loss.

Due to the uncertainty and the withdrawal of funding the market has to some extent become unpredictable. In my home city of Adelaide, well located properties with strong covenants in the under $2 million submarket are in good demand with sales in some instances at capitalisation rates below those of the pre-

An address given to the NZIV Annual Conference held at New Plymouth on 22 April 1990

crash era. No doubt an example of the flight to quality and security. On the other hand there is no demand for vacant off centre property.

In terms of valuation practice it is my opinion that valuation in the current market will create more problems for the valuer than those caused by the falling market.

We have the manager of certain property trusts endeavouring to influence valuers to value properties within their trusts at above market value to minimise the reduction in the selling price of the trust's units. Finance companies and banks requiring valuations on the basis of not a forced sale but a "readily saleable value" as against the price that would be obtained over the extended selling period required in the current market. If we value at the "readily saleable value" the owner could sue the valuer due to the property selling at below its market value, and if we provide a market value and the property is later sold in the current market, the financier may not recoup the loan and once again we can be sued. It seems to be necessary to provide two values or a range of values for a property.

In terms of the rental market, the massive over-supply of office space has brought about a situation whereby the magnitude of incentive deals are of previously unheard proportions. The situation has gone from inducing the tenant with an odd Mercedes or two to a full fitout and even to a situation reported to have happened in Melbourne where an inducement equivalent to a rent free period of between four and six years was paid. How is the rent to be determined on review in two years in the latter case? The tenant will claim that he is still in the rent free period and therefore should be paying no rent, the landlord will claim the passing rental plus an increase. Will the determining valuer use the (A+B)/2 approach? He may even have to go back to basics and determine a reasonable return on cost as the recent negotiated leases with tenant inducements have secrecy clauses and evaluating the inducement is a task for Sherlock Holmes. The full story on comparable rentals is difficult to obtain.

The challenges meeting the profession in rural practice are equally daunting with environmental issues, wide fluctuations in farm costs and returns, lack of sales evidence and the age-old problem of the adjoining owner purchase.

In association with the current market conditions we have also to contend with unrealistic turnaround times and reduced fees.This has been brought about by the reduction in the amount of valuation work available.

We are now in a period where real estate is not only compared with alternative investments in a country but also between countries with the added advantage of geographic diversification of their real estate portfolio. Prior to the crash a two-tier market had emerged for some types of property in Australia. The price an overseas buyer, notably Japanese would pay and the lower local market. Once again the need for two values?

I turn now to the Australian Institute of Valuers and Land Administrators. The Institute was formed in 1926 as the commonwealth Institute of Valuers. It operates on a Federation type basis with a Divisional Board in each State providing two members to the governing General Council. We have a current membershipin the order of 5,500. Major changes to the Institute over the years have been in name, from Commonwealth to Australian, and in 1988 an expansion in criteria for membership by the establishment of a Land Administration designation. Applicants for the new designation must have had practical experience in a broad range of property areas.

Membership of the Institute requires the passing of a educational course approved by General Council and three years practical experience. There are degree courses available in all States except Tasmania although several lesser courses are still recognised by the Institute in New South Wales and Queensland. There has been a move towards post graduate education in recent years and all the mainland States have developed post graduate diplomas and several of these States will have masters degrees available next year.

Although there is liaison between the various Registration Boards and the Institute in Australia, and membership of Australian Institute of Valuers and Land Administrators is recognised for registration, there is not statutory controls in regard to the membership of our Institute. In fact in the Australian Capital Territory and the Northern Territory there are no licensing or registration requirements for valuers. The move in Australia is towards deregulation or co-regulation. This matter has been discussed by government but at this stage we have not been provided with any firm proposals. A move that has caused concern in South Australia is the abolition of our Registration Board and the incorporation of Valuers Licensing legislation into the Commercial Tribunal which also handles such matters as the landlord and tenant complaints, used car sales people, real estate sales persons, builders etc. One valuer member from a panel joins the tribunal when a valuation matter is heard.

Since 1976 we have had a reciprocity agreement with your Institute and a number of your members have moved to Australia, particularly South Australia andjoined our Institute. It shouldbe noted that the reciprocity is on an Institute to Institute basis and does not automatically cover graduates of your Universities who are not members of the New Zealand Institute of Valuers. As with the provisions for our members wishing to join the New Zealand Institute of Valuers a 12-month residency and practical experience requirement under the supervision of one of our members applies. At the end of that period the applicant is examined on Australian law and valuation practice.

We have also had for some time a similar agreement with the Canadian Institute. On an international basis our Institute is a member of the Pan Pacific Conference and the Commonwealth Association of Surveying and Land Economy.

Some of the current issues facing the Australian Institute are as follows. Our Institute is about to embark on a path to merge with the Society of Land Economists. The Society has a similar role to that of the Property Management Institute in New Zealand. A joint Merger Committee was formed with the Society after initial discussion and this Committee has had a number of meetings over the last six months. We will be in a position after our General Council Meeting in May to put a firm proposal to both our memberships.

The Councils of both organisations recognise the broad advantages that would result from the merger. These include bringing property professionals into closer contact, speaking as one voice on public issues and being a more effective lobby group, achieving more with our resources through improved economies at scale and direct co-operations in the funding and development of educational courses.

The proposition will be for a full merger with the Society and the formation of a new body with the only differentiation between the two professions being in post numeral letters.

In regard to the often unrealistic turnaround times and low fees for finance valuations, we are having discussions with the Australian Finance Conference and jointly preparing a format for finance valuations.

In regard to profession practice standards we see the need for further development of standards and an extensive questionnaire has been prepared for members to determine current practise particularly in regard to how instructions are taken, inspections undertaken and the sources of information and level

Appraisal and Professional Practice in Canada

by Robert Mason
President, Appraisal Institute of Canada

Canada is a vast country, 5000 miles from east to west coasts, extending northerly from the US border to the North Pole. It has almost ten million square kilometres, yet is one of the least populated countries in the world with about 26 million people.

It has hundreds of cultural influences, but apart from the native Canadians,

s -- Y the influence of the two

Robert Mason

founding nations, England and France, are most obvious. We are officially a bi-lingual country, though it is recognised that French is the first language only in Quebec, in parts of Eastern Ontario and New Brunswick and in a French area of Manitoba.

Thirty per cent of the population lives in the southern part of Ontario, and by far the majority of the population lives within a couple of hundred miles of the US border.

Canada is a young country, settled by Europeans in the 17th century, and becoming a nation only in 1867. In fact, our tenth province, Newfoundland, joined Confederation only in 1949. We also have two Territories, Yukon and Northwest, in the far north of the country, both of which have hopes of becoming full Provinces at some date.

Canada is blessed with natural resources, the fishery industries of our east and west coasts, extensive forestry operations in the Maritimes, British Columbia and Northern Ontario, rich mineral wealth with precious and semi-precious metals as well as other mineral resources, probably the largest supply of fresh water in the world, and extensive oil and natural gas reserves, in South western Ontario, Alberta including the oil fields as well as the tar sands of Northern Alberta, and the off-shore reserves in the North Atlantic.

Before the Second World War, Canada had an agricultural economy, with few towns of any great size. With arapid increase in population, by immigration, after the war, there was a population shift to the towns, and the economy moved from an agricultural base to an industrial and financial base.

Canada is still vastly undeveloped and vastly underpopulated. While we have a somewhat restrictive immigration policy, currently, it still provides tremendous opportunities for immigrants. While there are pockets of major unemployment in specific locations and while we are currently in somewhat of a recessionary time, future prospects are excellent, particularly with the enactment of ourFree Trade Agreement with theUnited States. We have social welfare programs second to none, and Canadians enjoy one of the highest standards of living in the world.

The very large scale of the country, with its wide range of terrain, climate, geological and geographical areas, with the very limited population, most living in concentrated urban areas, provide a wide range of valuation challenges and opportunities to appraisers.

The Institute was founded in 1938, particularly to meet the needs at that time. With the Depression and the Dirty Thirties, many Canadians could not continue paying their mortgages, resulting in the lending institutions repossessing and owning extensive property holdings. Many of these were in the Prairie provinces, where there had been no open-market sales for many years, during the hard times.

The property managers of those western-province mortgage operations came together primarily to share their views and discuss common concerns in respect to their foreclosed property holdings. They had to develop methods of estimating property values in non-existent markets, so to reassure their shareholders, investors, insured etc, of the financial stability of their particular companies.

These individuals met in Winnipeg, founding the Institute there in 1938, and initially it was heavily influenced by rural concerns. Valuation advice was sought from the Association of Farm Managers and Rural Appraisers, south of the border, and a fledgling Appraisal Institute got off the ground.

With the post-war boom, and a move to the cities, the rural influence became less important, and the next major influence on our Institute's growth was the government's establishing the National Housing Act in the early 1950s. With C.M.H.C. insured mortgages, there was a need for qualified appraisal services, andC.M.H.C. hiredalarge number of qualifiedR.I.C.S. members from the U.K.

This influx of qualified valuers brought a new dimension to our Institute, and with assistance from the American Institute, in the late 1950s, early 1960s , we established our own appraisal courses and designation, the AACI. The CRA designation was

continued on page 11 4

An address given to the NZIV Annual Conference held at New Plymouth on 23 April 1990

Australian Appraisal

continued from previous page

"normal practice" in relation to a number of areas within the valuation process.

In terms of professional development we are moving towards a formalised programme which, on present indications, will most probably be voluntary for the first year or two and then compulsory.

In this brief overview I have attempted to illustrate to you the similarity between practice and the issues facing the professions in our two countries.

Immense gains can be achieved from closer cross-Tasman and international ties in terms of awareness of the global real estate market, threats and opportunities facing our Institutes and the economies in time and money in being aware of materials, services and policies developed in other countries so that we are not re-inventing the wheel. The Australian Institute of Valuers and Land Administrators looks forward to working in closer co-operation with your Institute. A

Reciprocity Between The New Zealand Institute of Valuers (NZIV) and the Appraisal Institute of Canada/Institut Candien des Evaluateurs (AIC)

Following the signing of the agreement of reciprocity at the April 1990 New Zealand Institute of Valuers' Council Meeting, the respective governing bodies have advised the details of reciprocal recognition and membership as follows.

APPRAISAL INSTITUTE OF CANADA/INSTITUT CANADIEN DES EVALUATEURS

The AIC advise as follows:

RECIPROCITY WITH NEW ZEALAND INSTITUTE OF VALUERS APPROVED

MOTION NO.11

It was duly moved, seconded and unanimously approved that, subject to a reciprocity agreement with the New Zealand Institute of Valuers (NZIV), the AACI designation be awarded to designated members of the NZIV, subject to: a minimum one-year residency requirement, under the sponsorship of an AACI in our articling programme; an interview with the Admissions Committee similar to that given AACI candidates in our articling programme; a favourable recommendation by the Admissions Committee; and payment of the designated fee; and

FURTHER, that the above be conditional upon the ANZIV (Associate New Zealand Institute of Valuers) being awarded to AACI members, subject to a similar residency requirement and following satisfactory interview and approval by the Valuers Registration Board of New Zealand. (Mason/Stroud)

The details of the reciprocal recognition have now been determined as

Summary of Requirements for accelerated entrance to designated membership;

NEW ZEALAND INSTITUTE OF VALUERS: ANZIV (ASSOCIATE NZ INSTITUTE OF VALUERS)

To receive use of the AACI designation, an ANZIV:

1. Must have earned the ANZIV through normal admission procedures (as opposedtoa reciprocal agreement)from the NewZealand Institute of Valuers. Confirmation must be received by our office from the New Zealand Institute of Valuers' head office regarding Items 1 and 2.
2. Must be a member in good standing of the New Zealand Institute of Valuers.
3. Must apply for admission to candidacy in the Appraisal Institute of Canada.
4. Must maintain residency within and practice the profession of real estate appraisal in Canada under the sponsorship of an AACI for a period of one (1) year preceding the date of application.
5. Must attend an interview with the National/Provincial Admissions Committee of the Appraisal Institute of Canada, supplying representative samples of his/her current work product.
6. Must attend the Institute's Professional Practice Seminar and supply proof of attendance before applying for designated membership.
7. Must complete the prescribed Appraisal Institute of Canada application for designated membership.
8. When above criteria met, remit a non-redundable filing fee of $100 (Canadian).

Enquiries regarding the AIC and any aspect of membership should be directed directly to the AIC, to

The Executive Vice President
Terrence J Gifford
National Office, Appraisal Institute of Canada,
Suite 101, 93 Lombard Avenue,
Winnipeg, Manitoba R 3B 3B1
CANADA

Likewise the New Zealand Institute of Valuers now advise for Canadian appraisers resident in New Zealand as follows.

NEW ZEALAND INSTITUTE OF VALUERS

1. The applicant must have Accredited Appraiser Canadian Institute (AACI) status in the Appraisal Institute of Canada and be in good standing within the Institution.
2. The applicant must be a fully qualified valuer. No partial or restricted qualification will be recognised, or accepted by, the New Zealand Institute of Valuers.
3. "Live status" is to be confirmed, the (New Zealand) Valuers Registration Board and the Appraisal Institute of Canada will need to give clearance on complaints, financial standing, etc. It will be the responsibility of the applicant to present to the New Zealand Institute of Valuers' General Secretary letters attesting to these facts.
4. Resident status in New Zealand, i.e. 12 months in New Zealand as country of domicile.
5. One year's full time or equivalent experience within New Zealand to satisfy the (NZ) Valuers Registration Board.
6. Completion of whatever law papers (and any other examinations) that are required to meet the (NZ) Valuers Registration Board requirements.
7. A member of the AIC, holding AACI status and fulfilling all the criteria for registration as a Valuer in New Zealand and also fulfilling the criteria in Rule 10 for advancement would automatically be eligible to apply for advancement to Associate status within the NZIV (having of course already been admitted as a member). If not fulfilling the criteria for advancement but otherwise meeting the registration criteria they would be eligible to apply for intermediate membership (Rule 15B). A professional interview prior to awarding the letters ANZIV will be required to be passed.
8. Reciprocity is only at AACI/ANZIV level.

(The New Zealand Institute of Valuers notes and agrees that equivalent conditions will apply to New Zealand valuers migrating to Canada as outlined in the ACI "Motion No 11")

Enquiries regarding the NZIV and any aspect of membership should be directed directly to the NZIV:

The General Secretary, John Gibson
National Office New Zealand Institute of Valuers
PO Box 27-146
Wellington
NEW ZEALAND.

John Gibson
General Secretary

Valuer Registration in a Deregulated Profession

by D J Armstrong

Over the last two to three years there have been many conflicting messages coming from both the profession and from Central Government over the future direction of our profession. From my position as a member of the Valuers Registration Board (VRB) , I have been able to observe the conflicting signals, while at the same time remain with the very firm direction that the current legislation gives to the New Zealand Valuers Registration Board.

I would like now to pick up where a speaker at the last AGM commented on the cliche "That if its not broken, don't try and fix it". I think it is worth expanding on that theme a little and to do so requires us to look back into some of the history of the Valuing Profession in New Zealand. Valuer legislation was set up in 1948 and has served the profession well over the years. In fact we were one of the first countries in the western world to set up and operate under such legislation.

A number of other countries have followed our example and our legislation over the years. However, that should not lead us into the temptation of complacency, for while the valuers legislation is not "broke" and the main "engine" department works reasonably well, there certainly has been a recognised need for some modification and upgrading to comply with modem requirements.

To this end a Valuers' Review Committee was setup in the early 1980s. That committee spent a considerable amount of time in setting the basis for reviewed legislation. I understand that the recommendations from that committee were sent to Government, but never saw the light of day. In the late 1980s, the Government became hellbent on disbanding all public protective legislation from our and many other professions, proposing to leave the issue of public protection, discipline and work standards to that magical and all encompassing ogre of market force. This attitude, I observed, was in no small way supported by a number of well placed people in our profession, some of whom are still pursuing that theme today.

I see that philosophy as being idealistic and impractical. I would liken it to a revocation of both the speed restriction and drink drive laws, on the hypothesis that the speeding and over the limit drivers will ultimately self destruct and leave the rest of society in a safe and secure world. As with the uncontrolled driver, the uncontrolled valuer is going to create havoc amongst the public at large and detrimentally affect members of the

Don Armstrong is a member of the NZ Valuers' Registration Board. He is a Fellow of the NZlnstituteof Valuers and is a sole practitioner in rural :valuation and farm management consultancy at Pleasant Point in South Canterbury. This addresswas presented at the Annual General Meeting of the NZIVheld at New Plymouth on 23 April 1990,

Appraisal and Professional Practice in Canada

continued from page 9

introduced in the late 1960s particularly to meet the anticipated need for residential valuations resulting from the proposed Capital Gains Tax. Particularly since the early 1960s, the Institute has continued to up-grade its academic program and qualification skill requirements. We now have a mandatory articling program as well as re-certification program for designated members. We have long had a Code of Ethics and Standards of Practice, and in 1988 introduced a mandatory Professional Liability Insurance Program.

The practice of appraisal is not regulated in Canada, save by our Institute as a voluntary organisation. In fact, literally anyone may hold himself out as an appraiser and practice without any constraints, qualifications or experience, and to any standard he or she wishes. This lack of Government regulation has been traditional in North America, where Government has not wanted to overly involve itself in commerce.

This, however, is changing and in the United States, licensing/ certification of appraisers will be required from mid-1991, in most transactions involving real property. Apart from the Province of Quebec, however, in Canada, there is virtually no restriction. Quebec law does require appraisal witnesses in courts to be members of the Professional Organisation in the Province. Certain Federal and Provincial regulations/legislation require certain types of appraisals to be completed by designated or qualified individuals.

Our Institute continues to pressure the various Governments to regulate the appraisal profession in Canada. As a result of a number of recent failures of financial institutions, partly resulting from inadequate appraisal standards andregulation, we have every confidence that some form of regulation will be instituted in the next few years.

Our Institute will continue to play the leading role in appraisal education, regulation and practice in Canada. With the current signing of a reciprocal membership agreement with your Institute, subject only to a short residency requirement, our Institute can offer your qualified members the opportunity to practice your profession in Canada.

My Institute welcomes this opportunity and the recognition you have given us. We hope this formal action, taken after many years of informal relations between our two Institutes as sponsors of the Pan Pacific Congress, will result in a strengthening of the professional interests we share. We look forward to many years of co-operation and mutually beneficial exchange, with your Institute. A

...the uncontrolled valuer is going to create havoc amongst the public at large and detrimentally affect members of the profession...

profession before he or she finally self destructs, or sees the folly of their ways. In my view, it is absolutely imperative to have rules and regulations governing the action of our profession and equally important to have such regulation empowered by legislation, covering all members of the valuing profession.

It is interesting to note that in early 1986/87, the Government set up a working group on Occupational Regulation made up of people from Treasury and Trade and Industry who seemed to be charged with a brief of pulling down all of the existing legislation and putting in place some scheme that would enable market forces to prevail. In late 1987 and through into 1988 as a result of the sharemarket crash, we saw many major companies crash very quickly. Notably some of those were property companies in which registered valuers had a considerable input in the supposed asset backing of the share scrip. The VRB became inundated with complaints about valuers and politicians were complaining that little or nothing was being done to control the profession. Those same politicians only months before had set up a working group to de-regulate the profession. The VRB had recognised the problem of its empowering legislation years before, and that legislation, while ultimately being effective, was procedurally inordinately slow and cumbersome. Consequently the VRB and NZIV had been trying to get legislation reviewed since the early 1980s.

The VRB has for many years been meeting for a number of days every month in order to try and get through the back log of complaints before it. Some progress has been made.

In 1988, the Valuers Act Review Committee was re-activated with the Valuer General as Chairman and members comprising two from VRB, two from NZIV and one other apart from the Chairman from Valuation NZ. That Committee spent many hours going through a proposed draft that was sent to Government in the early 1980s and made submission to the Working Group on Occupational Regulations in the hope that that Group would be better informed to advise Government on the proposed reviewed legislation.

That Working Group on Occupational Regulations reported to Cabinet and then in a press statement on September 6 1989, the Hon Peter Tapsell noted "that in essence the current regime should remain in force". While that may sound just fine, the small print of the Working Party's report to Cabinet is full of fish hooks which at the end of the day could well render the proposed new Board ineffective. The simple facts are that the recommendations which have been adopted have taken away compulsory membership to the NZIV which in itself is in today's world acceptable, but in effect, the proposed new Board will have to be self funding -i.e. self funding from the issuing of Annual Practising Certificates (APCs) or similar, where as in the past a considerable amount of funding has arisen from the Government through Valuation New Zealand. The cost of running the Board with a large number of disciplinary hearings is very high, so the cost to Registered Valuers under a proposed scheme will be very high. This could result in many valuers not taking out APCs and will to all intents and purposes let their registration lapse. I can see the scenario where a practice may maintain one registered valuer and otherwise operate with a team of non-registered people. It is foreseeable that we could end up with only 100-150 registered valuers in the country who would have to pay for the operations of the proposed Board. That number of registered valuers would be insufficient to fund the prescribed duties of the Board and the system would collapse under its own weight. In my view there has to be a more broadly based system to capture all valuers or would-be valuers, so as the funding of the Registration and Disciplinary processes are spread by legal compulsion across the whole profession. This may be in the form of an annual registration fee for all valuers, and for those in practice an additional APC, even if this means restricting people from holding themselves out to be valuers of property, as opposed to the current protection afforded only to registered valuers.

If Government enacts the recommendations of the Working Party, it is my judgement that the scenario that I have just set out will evolve, that we as a profession will have people valuing property who will not be legally answerable to any body or statute a situation which would put us back beyond 1948 when the original legislation was enacted.

Your Council and the present Board has been endeavouring to identify the problems which will emerge from the current proposals, and they plan to make representations to the Minister, and to the select committee once the legislation is brought into the House, which may be next week, next month or next year. It will be equally important for members of the profession to similarly make submissions, either directly to their MPs or to the select committee if those members are concerned enough about the current proposals. I urge all members of the profession to become fully aware of the current status of valuer legislation and participate in the change of direction which is occurring in our profession. A

Valuation of Hotels and Taverns

by C C Barraclough

I am not going to look at the valuation of the Park Royal or its equivalent although the basic valuation principles remain unchanged. Rather I shall centre on the older city provincial or rural hotel where the trading emphasis is on liquor and to a lesser degree on food and accommodation.

A hotel is a specialised form of realty. Its accurate valuation is an expert field and requires a particular knowledge of the industry. This applies in respect of both the technical aspects of the valuation and in the accumulation and analysis of sales data. Unless you have that knowledge you should not be embarking on the valuation.

There are a number of approaches to the valuations of licensed premises however I contend that the correct approach is to examine the true profitability of the unit under average management conditions after taking into account any extraneous elements.

...the correct approach is to examine the true profitability of the unit under average management conditions...

The valuation is not a matter of deriving the aggregated worth of realty or interest in lease, plant and chattels and goodwill, if any, but rather the approach is to determine the integrated value of those assets by reference to the trading performance thereby establishing the going concern value and ensuring that the viability of the business supports the intrinsic worth of the component assets.

In other words you cannot realistically divest the value of the individual assets from the value of the business in some form of elemental build up to the valuation without consideration of economic factor. The value given the specialised use and assuming there to be no alternative higher and better use is simply a function of the:

liquor consumed
food eaten
bods on beds

This applies equally if you are valuing just the realty or in a lease situation.

I shall call it the economic or trading approach.

Obviously this should not be the sole method of valuation and it is the valuer's duty to check the assessment by all appropriate methods including cost replacement, rental/investment and comparable sales. Reference should be made to comparative market data but unfortunately comparables are of little assistance in the absence of trading knowledge pertaining to the property sold. You must know the full circumstances of the sale. It is dangerous to analyse sales as a ratio to turnover if there are differences in sales mix. For the same reason, broad brush industry averages such as a value equalling 100 per cent of turnover are meaningless. Furthermore any such simplistic comparisons take no account of investment risk. At best they can provide broad parameters.

The point is illustrated by the following analysis of actual sales.

:Chris Barraclough holds B Com fromAuckland University and is an Associate of the NewZealandlnstitute of Valuers.

He is the Christchurch principal of Darroch and Co. and specialises in the valuation of going concern, commercial and industrial properties.

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APPENDIX A

HOTEL DARROCH

Safes Analysis ' Sample

	Turnover	GP	Value GC	Ratio *SP/To*
Tavern A	$1,150,000	50.95%	$880,000	
Tavern 13	$850,000	45.34%	$680,000	1.25
Tavern C	$858,000	41.95%	$550,000	
Tavern D	$1,285,000	36.622%	$875,000	

In Tavern B, 31% of turnover was bottle store. In Tavern D, 49.5%.

The percentage range in the ratio of SP/TO as illustrated is 25%. You could be 25% wrong if your turnover mix and investment risk did not mirror the comparable as simplistically analysed. Unfortunately some in our profession would find this a tolerable margin of error.

Forget about your broader "rules of thumb" as expounded by the less knowledgeable agents. There are however industry trading standards which do provide guidelines and I discuss these later.

The economic or trading approach to the valuation follows from the capitalisation of the estimated net maintainable cashflow derived from the operation of the business income before interest, depreciation and tax.

Some valuers talk capitalisation of estimated net maintainable income, net cash flow less depreciation. My preference is for the capitalisation of the net cashflow in that it obviates the need for a prior assessment of the intrinsic worth. Given the basic valuation premise it seems anomalous to me to be working to sum for capitalisation to a going concern value which already includes as a component some direct function of an assessment of the fixed assets content.

Personally I am of the opinion that the annual building maintenance and chattel replacement allowance must be adequate to the individual circumstances and that implicit in the market derived net cash flow yield is a weighting for obsoles-

This paper was presented to the NZIV Seminar held at New Plymouth on 24 April 1990

cence and future maintainable economic life. The decision comes down to a consistent analysis of the evidence.

The derivation of the net cash flow follows from an analysis of both the historic and current trading performance together with reference to comparable industry standards for turnover, departmental gross profit, direct labour costs, contribution and overhead. Budgets are less relevant. The financial institutions are now simply not interested in future upside expectations in respect of turnover nor will they place credence on purported cash milkings. It is the actuals in the accounts that are of prime importance and remember that not all accounts are prepared GSTexclusive. For your purposes you will need to excludeGST.

"it is preferable that you secure the financial accounts for a period of up to three years."

It is preferable that you secure the financial accounts for a period of up to three years. This enables you to look at trends in respect of turnover, sales mix and departmental gross profit contributions and enables you to adjust for any aberrations in expense items. If the accounts as presented do not provide the detail for a departmental analysis, the owner, manager or lessee as the case maybe will keep a day book with the daily takings for the respective trading departments separated. The day book will be GST inclusive. Remember to adjust.

"In the preparation of a hotel valuation it is not sufficient to say that you have sighted accounts."

In the preparation of a hotel valuation it is not sufficient to say that you have sighted accounts and that based on the trading circumstances you value the hotel at the amount of. The lending institutions are now requiring a fully documented and fully reasoned report. They want the detail

I propose to work through an example. It is a hotel that Darroch has valued, the hotel subsequently selling as a going concern. The new owner is endeavouring to onsell the business component in association with a long term lease. Lion are agreeable to our use of the example but for obvious reasons wish that the hotel's identity remains anonymous. I shall call it Hotel Darroch and it is located within a major New Zealand city.

To set the scene, Hotel Darroch is a conventional older style hotel erected in two stages circa 1930 and circa 1940 and comprises at ground a large public bar, lounge bar, bottle store, kitchen and dining room and at first floor accommodation and a manger's flat.

When inspecting hotel premises you need to be particularly mindful of bar and bottle store configuration, visa vis operating efficiencies, required labour content and management control. Where the operation is fragmented profitability will fall. For example I have recently valued a tavern in Auckland with bars over three floors, wages are more than twice the industry standard and the gross profit is low and presumably a reflection on "shrinkage" effectively a polite term for thievery. Be on the lookout for deferred maintenance. Try and form an opinion on management expertise.

At this point your valuation report will present a precis of the trading circumstances as illustrated in Appendix B.

For ease of presentation, I have restricted my analysis to the latest trading year. Food has been discontinued. Where economies of scale justify a food operation optimal gross profit is 35%, direct wages 35%

APPENDIX B

HOTEL DARROCH

Financial Accounts umman

.Y...e a..r... E.n .d .ed 31 March 1990

REVENUE		% SALES'
Public	$409,934	41
Lounge	109,870	11
Bottle Store	387,715	
Food		
Accommodation	36,844	
Cigarettes	49,769	
Other ?	14,306	
	$1,008,438	
GROSS PROFIT	$225,464	
Public	71,416	
Lounge	77,921	
Bottle Store	36,844	
Accommodation	8,009	
Cigarettes	14,3061'	
WAGES		
Public	$128,202	
Lounge		
Bottle Store		
Accommodation	5,680	
	$133,882	
iIRECT COSTS.....		
lic Bar	$45,750	
ccommodation	4,942	
	$50,692	
CONTRIBUTION		
Public	$200,849	
;EXPENSES/OVERHEADS		
Salaries/Allowances	$52,862	
Operating	68,636	
Properly	46,123	
	$167,621	
NET CASH FLOW		

You will note the inclusion of the percentage analysis. Fundamental to a report and valuations is a comment on performance. For example:

- turnover has increased by 5% but principally through the bottle store hence the overall reduction in gross profit percentage;
- the departmental gross profits are towards the upper limit of industry standards;
- wages are high at 14% of liquor sales particularly in view of high bottle store content. Suggest 10% bar, 6% bottle store;
- salaries and allowances high;
- property expenses seemingly high but reflect an ongoing maintenance requirement given the age of the premises and significant increase in land tax following on from Government revaluation.

I shall now modify the above, adopting actual turnover, actual gross profit in view of the standard departmental contributions, modify wages and salaries so as to reflect the industry standard under average management circumstances, modify operating and maintain property expenses. The salary levels I have used recognise an implicit management requirement. The modified accounts summary is shown below;

APPENDIX C
HOTEL DARROCH
Modified Financial Accounts Summary
Year Ending 31 March 1990

REVENUE	$1,008.438	
		% SALES
GROSS PROFIT	$434,050	43
Wages		
Publlic	$40,993	10
Lounge	10,987	106
Bottle Store	23,263	
Accommodation	5,680	15
	$80,923	
Direct Costs	$50,692	5
Contribution	$302,435	30
Expenses/Overheads		
Salaries/Allowances	$45,000	
Operating	75,682	
Property	46,123	
	$166,755	17
Net Cash Flow	$135,680	13

An analysis of sales appropriately adjusted for business and investment risk suggests a net cash flow yield of 20%. This yield has been analysed to indicate the required overall capitalisation rate on the total investment inclusive of realty, chattels, plant and goodwill. The indicated going concern value is $680,000. Hotel Darroch sold for $685,000.

There is a body of opinion which recommends that the sales analysis exclude chattels thereby deriving a net sale price and yield rate comprised of realty and goodwill. The justification is that plant and chattels depreciate rapidly in real terms and require replacement in seven-year cycles. Your overall yield rate may not be providing sufficient sensitivity to the future economic worth of plant and chattels. Chattels are therefore valued in situ on the basis of future economic life. The limitation in this approach as I see it is that it precludes any economic adjustment to the value of the chattels vis a vis the valuation scenario in respect of an all-up going concern value. In the final analysis it comes back to a requirement for full knowledge of comparable sales and the consistent analysis and application of the sales data.

My valuation will now include a summation valuation without any adjustment for economic circumstances. In this case:

Land as an Occupied Site	$500,000
Improvements	$400,000
Realty Value	$900.000
Plant and Chattels	$75,000
Total	$975,000

I would conclude the valuation by saying that the value can be fairly stated as a going concern at an amount of $680,000 which may be hypothetically apportioned as follows:

Land as an Occupied Site	$500,000
Improvements	$150,000
Plant and Chattels	$30,000
Going Concern Value	$680,000

I have based an apportionment on a pro rata writedown of the added value of building, plant and chattels.

I do not set out to identify a goodwill component and I do not employ a super profit approach. Implicit in the super profit approach is the prior assessment of realty, plant and chattels so as to calculate first the required allowance for depreciation and second the required return on investment. The super profit is too sensitive to your fudging of the variables. Furthermore in recent times there has been a significant erosion of goodwill.

We seek to maximise a realty content within acceptable limits. This in turn maximises the ability to fund and overcomes the reluctance of financiers to advance against the goodwill. Obviously there is a goodwill content where the going concern value exceeds the realty plus plant and chattels and certainly with the separation of the freehold and leasehold interests a goodwill component will more probably emerge.

As I mentioned previously, a lease of Hotel Darroch is now available for purchase.

The calculation of the leasehold value is no different from that of the going concern freehold value with the exceptions that property expenses will now include rent and the required investment yield on the business income will be greater.

Three to four years ago the hotel business was a fashionable industry to be in with freehold and leasehold interests changing hands for sums well in excess of the real return from the unit. The hotel industry mirrored the motel sector in this regard. During these buoyant times rent levels increased to between 11%-12% of turnover. Little or no regard was had to departmental turnovers or relative profit contributions and this broad brush approach to the assessment of rent penalised units with a high wholesale to bar turnover ratio.

The reality of the situation is that hotels can no longer afford to sustain rental levels based on a flat percentage of total turnover without reference to sales mix and individual departmental profits. Suggested guideline percentages are shown below:

APPENDIX D
HOTEL DARROCH
Guideline Percentages Rent Calculation

Public Bar	10%-11%
Lounge Bar	11%_120/0
Wholesale	3.5%-4.5%
Bottle Store	6.0%-6.5%
Food	10%
Accommodation	20%-30%

Applying this rationale to Hotel Darroch indicates a fair current market rent:

Public Bar	$409,934 @10%	$40,993
Lounge Bar	$109,870 @ 11%	12,086
Bottle Store	$387,715 @ 5.5%	21,324
Accommodation	$36,844 @ 20%	7,368
Total		$81,771 Pa

The percentage to total turnover exclusive of cigarettes and other consummables is 8.11%. This well illustrates the impact of the sizeable bottle sore content in the overall turnover. At a gross profit on the bottle store of only 20% and the bottle store contributing 38% of turnover it is simply not feasible to expect an operator to pay a rental equating 10% of total turnover.

The rent is effectively assessed on an ability to pay basis, not on a desired return on the assessed intrinsic worth of bricks and mortar.

The lessee interest calculates:

Adjusted Net Cashflow under Freehold	$135,680
Less Rent	81,771
Net Cashflow under Leasehold	$53,909

The net cashflow capitalisation rate for leasehold varies between 25% and 30% where the lease term has 15 years plus to run. At 25% the indicated value is $215,000.

The valuation recalculates

Lessees Interest	$75,000
Plant and Chattels	140,000
	$215,000
Lessors Interest	
Land and Buildings, rent capitalised at 14%	$585,000

I would now like to make some comment in respect of the hotel tavern industry.

There has been a general reduction in turnover and profitability of hotel tavern operations. This has occurred in tandem with increasing unemployment and changing drinking habits with an increase in the ratio of bottle store sales to bar sales, increase in clubs and increase in home brew.

The Auckland office of Darroch have completed a number of valuations of hotel taverns through the Waikato area and turnover reductions have been within the order of 10%-15%. Going concern values have fallen appreciably in line with falling profitability and an increased perception of business risk in association with concerns as to the ramifications of deregulation under the Sale of Liquor Act 1989. The large motor inns and booze barns have suffered in particular given their high costs of operation.

Demand for the purchase of hotels and more particularly leaseholds has slowed. The disinvestment programme of the breweries has soaked up considerable numbers of prospective purchaser.

Brewery hotel sales are frequently subject to a trade tie, for example through lease arrangement. There is a head lease back from the owner operator to the brewery who in turn sublease to the owner operator. The sublease will require the owner operators to sell say 100% bulk beer, 80% packaged beer, 70% wines and spirits. The sublease rent will equate the head lease rent given loyalty. The trade tie does limit the range of beer that can be sold, the tie however is unenforceable at law.

The value impact is difficult to analyse but in the market for the most part has been minimal. Funding over the past 12 months has been more difficult to secure. Lending institutions have suffered significant losses through the speculative actions of investment companies. The funders still in the market are more prepared to back the total operations and will lend to 60% of the freehold going concern value.

In respect of leaseholds, funding against chattels is available to 50% of value with generally nothing advanced against the goodwill. To advance against goodwill the lease needs to be registered, the security is then adequate and will comprise a debenture over company assets, mortgage over the lease and an instrument against the plant and chattels. Nonetheless leaseholds are difficult to move in the current market.

In conclusion I shall briefly discuss the Sale of Liquor Act 1989. The Act became effective 1 April 1990. Control for the dispensing of liquor has passed from the Licensing Control Commission to the District Licensing Agency, effectively the district local authority. A license is no longer restricted to certain sites. A license is available to the applicant provided that the site and building comply with the various town planning, health, fire controls etc., the applicant's pedigree appropriate and specified criteria have been considered.

There are four categories of license:

On premises
Off premises
Club
Special

A licensee may hold more than one license contemporaneously.

The Act will potentially increase the number of liquor outlets. From a valuation viewpoint this will negate any site premium formerly associated with a restricted license and will impact to the detriment of turnover and profitability in outlets no longer meeting public drinking requirements. The ramifications will more probably occur in the cities as I cannot see significant new investment in small provincial and rural situations. A

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Valuation of Petrol Service Stations

by WJTiller

With the advent of deregulation by Central Government which has had a significant impact on property values particularly that of specialised property it seems to me timely that as a valuation profession we should review valuation methods and techniques employed in the valuation of specialised income producing properties. This paper attempts to make a contribution in respect of Petrol Service Stations.

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ate of the New Zealand In *'
stitute of Valuers and pres-
ently serves as *Chairman of*
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Warwick practises in the
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valuation of hotels, motels,
petrol services stations and
old peoples' homes. This
paper was presented to the
New Zealand Institute of
Valuers Seminar held at New Plymouth on 24 April 1990

1. THE RECENT HISTORY OF PETROL SERVICE STATIONS IN NEW ZEALAND WITH REGARD TO STATUTORY CONTROL

During the period leading up to 1987, the service station industry in New Zealand was regulated to the extent that oil companies were not able to directly own petrol service stations which resulted in little or no uniformity within the industry with regard to marketing and the development and upgrading of buildings. The bulk of sales outlets were privately owned and were in excess of the numbers required to service the needs of the motoring public.

With the passing of the Petroleum Sector Reform Act 1987, oil companies could purchase service stations and were able to enter into supply contracts with lessees which enabled them to not only protect existing market share but gave them the opportunityof taking a moreaggressive approach towards marketing with the view to increasing market share.

2. TRENDS IN THE MARKETING OF PETROL AND ASSOCIATED PRODUCTS

During the period from the end of World War 2 through to 1970, service stations provided for motor vehicle repair, servicing, and the merchandising of petrol, oil and associated products. Vehicles of that era required a relatively high degree of maintenance compared with those of today, consequently servicing and repair comprised a significant portion of business activity of service stations. Premises were often dirty and did not provide for merchandising of goods through showroom type facilities.

The period commencing some 20 years ago saw changes in the motor vehicle industry when vehicles required less servicing (because of better quality and technology). As motor vehicles became more sophisticated the motoring public required a greater range of services than previously which resulted in the advent of showroom type areas for the merchandising of goods relative to the servicing and maintenance of vehicles by owners. This trend was maintained into the middle 1980 period when, as a result of the anticipated deregulation of the petrol service station industry, the acquisition of existing, and sites having potential for petrol service stations took place.

Certainly within Wellington and I understand New Zealand-wide, the major petrol service stations are now oil company owned, they provide a "GAS & GO" type service in conjunction with small showrooms which merchandise brand and car care type products.

Within the Wellington area oil companies are particularly selective in terms of location both in and outside of the CBD. They have obtained ownership and in some cases redeveloped sites that have apetrol sales volume of 3 million litres perannum and which are considered to have growth potential. Recent redevelopments by Shell and Mobil within the greater Wellington area are on key sites and which meet the above criteria i.e. the marketing philosophy is aimed primarily at the sale of petrol and where small showroom premises have been constructed. More recently marketing gimmicks in the form of specials. discount car washes and now competitions (Caltex and BP) are evidence of companies attempting to maintain and increase market share.

Local service stations still provide workshop facilities for minor repair together with small showroom areas and which have petrol sales in the range of one to two million litres per annum. Small to medium sized suburban units (i.e. those that sell 1.5 2.5 million litres per annum) are normally well situated within their particular localities. They are sited at points where concentrations of traffic exist and where access and egress to motorways and major roadways are readily available.

3. FACTORS ESSENTIAL TO THE SUCCESS OF A PETROL SERVICE STATION

Factors of location evidenced by redevelopment by oil companies appear to primarily comprise traffic density, ease of access and visibility while the character of a situation will determine the type of buildings constructed. Other factors, secondary in importance to the above, relate to the hierarchy of the roading system limitations as a result of zoning e.g. noise and hours of operation, competition, the shape of a particular site (frontage is preferred to depth.)

Conversely, you can no doubt think of examples where a traffic by-pass, perhaps a one-way street system or an extension to a motorway has resulted in a degree of obsolescence within an existing petrol service station development or even perhaps to the complete demise of a business and the buildings standing thereon.

With the advent of the modem motor vehicle that can travel greater distances more reliably and at faster speeds, country service stations detached from concentrations of population are now no longer required and sit vacant. This is another example of the changing nature and risks associated with the industry.

4. VALUATION METHODS

The three prime methods of valuation comprise:

- the summation approach to value ie.. determining the reasonable replacement cost of the improvements and adding thereto the value of the land as developed;
- investment approach to value;
- the going concern approach.

The relative cost structure of improvements are well known to you and do not warrant mention here. However, because of the susceptibility of the service station industry to rapid change, economic and functional obsolescence of improvements is a significant factor to be considered in conjunction with depreciation, particularly where there has been a change in traffic patterns or as a result of increased competition more appropriate to consumer needs.

Equipment comprising fuel storage tanks, pumps, signage and dispensing equipment should not be include in a valuation as they are provided by the oil companies. CNG and LPG equipment is commonly operator owned. Accordingly the ownership of all gas dispensing equipment should always be determined and quantified within the text of a valuation report.

The going concern approach to value, which I prefer, requires the assessment on a summation basis of the land and buildings and plant, assessing a return to an owner-operator on land, buildings, plant and equipment and deducting those sums from the net profit of the business. If a surplus results this annual sum is said to be the value of the business (goodwill) expressed as an annual sum. During the 1986/87 period, of those units that interested oil companies for outrightpurchase, goodwill payment of +10cents per litre of fuel throughput was paid.

5. CASE STUDY

This service station is sited on the northern fringe of one of Wellington's northern cities fronting State Highway 2 where two small service stations existed (one has been relocated) to the south and north which provided limited competition. The property has particularly good visibility to a four-lane carriageway together with easy access and egress.

The unit was run as a 24-hour operation that provided all fuels, petrol, diesel, CNG and LPG. A medium to large showroom was used for the merchandising of accessories, a limited amount of fast food, dairy lines and periodicals. The workshop employed three mechanics. The buildings wereoriginally erected during the middle 1960 period and then provided a moderately sized forecourt and canopy for showroom and rear workshop facilities. The building was extensively added to and upgraded during the middle 1980 period together with the enlarging of the forecourt and canopy. Prior to upgrading, this unit provided for the needs of the motoring public within the general vicinity. Following the entry of a former oil company employee, an aggressive approach to marketing was undertaken, hours of trade were increased to seven days and, following the upgrade, the unit traded 24 hours a day. This unit is ideally sited mid way between the Wairarapa and Wellington City and by trading 24 hours a day and providing a full range of services, the full potential of the site was exploited.

The property was sold on the basis of a valuation of the land and buildings standing thereon plus the value of the plant and equipment plus goodwill. The transaction is summarised below.

VALUATION

Showroom, office, workshop & amenities area	
400.13m2 @$1,090/m2	$436,000
Canopy:	
190.17m2 @$310/m2	$59.000
	$495,000
Less depreciation allowing for upgrading, age and condition say 15%	$75.000
	$420,000
Other improvements comprising paving, fencing etc;	$25,000
The land	$135,000
	$580,000
Plant and equipment	$260,000
Goodwill	30,000
SALE AS GOING CONCERN	$1,140,00Q

Analysis of Goodwill Relative to the Net Profit Attributable to the Business

To analyse the goodwill of the business relative to annual profitability (the SUPER PROFIT) it is necessary to adjust the accounts of the business excluding interest and modifying where considered necessary the payment to Directors and allowances for depreciation. The resulting figure comprises the net profit adjusted for either low or high items of expenditure which are likely to change in the foreseeable future.

The goodwill of the business can then be determined by deducting sums comprising a return upon land and buildings and plant and equipment the residual comprising the annual super profit. this process is set out below:

Net Profit:	$136,000
Add back interest	$73,370
	$209,370
LESS adjustment for understatement of allowance for repairs& maintenance & depreciation on buildings and plant:	$13,270
Net profit prior to allowances for a return upon the realty and equipment	$196,100
LESS return on	
Land & Buildings $580,000 @ 10.5% $60,900	
Plant & Equipment $260,000 @ 15% $39.000	
	$99.900
Net profit Attributable to Business "SUPER PROFIT"	$96.200

Analysis of Goodwill Paid:

Goodwill paid $300,000 + by super profit $96,200 equals 3.12 years purchase.

6. SUMMARY

The service station industry has been one of rapid and remarkable change over the last decade where factors such as convenience, service, and cleanliness have become of increasing importance for the consumer. From a marketing point of view oil companies have endeavoured to obtain increased market share initially by substantial redevelopment however because of the risks now associated with large capital outlays in buildings oil companies now spend relatively smaller sums of capital in construction of service stations.

The market in New Zealand is presently dominated by Caltex and Mobil both being American-based and members of the Exxon Group, the other players comprise Shell-Dutch based and BP-British owned and Europa (now wholly owned by BP). For those of you that have read the book "The Seven Sisters" which provides a history of the American Oil industry from the discovery and marketing of oil through to the formation of "Opec" you will be aware that the foreign ownership of the oil industry in New Zealand as it presently exists provides a measure of protection to the New Zealand motoring public.

Present trends certainly indicate that sites having high sales volume of the "Gas & Go" type category will remain in oil company ownership while those providing a larger range of goods and services in the form of small showroom and workshop areas are likely to remain in private ownership. A

The Land Tax Act and Leasehold Interests

by M L Graham

PREAMBLE

Adverse publicity has surrounded the Land Tax Act, firstly since the doubling of the rate of tax from 1%-2% by the Honourable Robert Muldoon in a budget of the early 1980s but coming to a head on the revaluation of Wellington City assessed on the basis of "height of the boom" redevelopment land values in 1987 at which time tax payers were faced with five to ten-fold increases in liability.

More recently (during 1989) the Commissioner appears to have decided to chase up those lessees who in the past have never filed taxation returns and a scattering of lessee's interest calculations are being submitted to such lessees throughout the country by Valuation New Zealand. Not all lessees have been advised of their liability and many are unaware of such liability but as a result of my involvement in a number of objections to assessments, I submit below some varied thoughts on what must rank as one of the less successful pieces of legislation introduced into New Zealand (in terms of understandability, operational costs and equitability).

THE ACT

In New Zealand, Land Tax is payable under the Land Tax Act 1976 (No 64) and numerous subsequent amendments namely 1977 (No. 59), 1978 (No. 21), 1981 (No. 17), 1982 (No. 139), 1983 (No. 12),1986 (Annual No. 36),1987 (Annual No. 105), 1988 (Nos. 12 & 124) and 1989 (No. 50).

RATE OF ASSESSMENT

Apart from land where certain partial exemptions exist (for example Maori land), the rate of tax under the principal act was until 19811% of the value of the land assessed, increased under the 1981 amendment to 2% then subsequently decreased in stages under the 1989 amendment, firstly to 1.5% for the 1989/ 90 year of assessment then back to the original 1% from 1990.

LAND TAX LIABILITY

Amendments tend to deal with exemptions and the rate of land tax. The provisions under which general liability is applied are embodied within the principal act, in particular Part 1 dealing with the valuation of land and Part 11 dealing with the imposition of land tax on the tax payer and various other bodies which might become jointly or wholly liable, (mainly agents for the owner, tenants, mortgagees in possession, etc).

Within Parts 1 to 111 of the Act, the following sections are of particular interest.

Section 4 Meaning of Terms "Land Value" and "Improvements"

"Land" is described as an "owners' interest" and is to be assessed "free of any mortgage or encumbrance" and "exclusive of any improvements".

In the past, the term "encumbrance" has been assumed to include leases and subleases but as a result of an objection to Government Valuation (Radford & Co Ltd, V the Valuer General), by way of decision dated 26 July 1989, it was ruled that the existence of leases precluded immediate redevelopment of the land in that particular case and accordingly it was necessary to reduce the land value by an amount reflecting the detrimental effect on the owners interest, of those leases (the cost of tenant buy out in this instance). This decision (see NZVJ December 1989) has been taken to appeal by the Valuer General.

Section 5 Land Value shown on District Roll to be adopted

This section specifies that unless a new valuation has been applied for under Section 41 of the Valuation of Land Act 1951, then the roll value is to be adopted as the valuation of the land on 31 March in the year preceding the year of assessment (a "year of assessment" being measured from 1 April to 31 March of the following year).

Notwithstanding the provisions of this section, there are subsequent sections providing for values to be assessed t other times (see Sections 8 & 9).

Section 7 Apportionment of Land Value

This section provides for the apportionment of an existing roll value between tax payers in the absence of separate values being assessed, where part only may be assessable for the purposes of Land Tax or different parts may be assessable at different rates or require for any reason to be separately valued.

It would appear that Valuation New Zealand has relied upon this section of the Act in order to apportion roll values between lessee and lessor. It is my view however that this section is of insufficient scope to incorporate calculations of lessee/lessor interests and is intended solely to apportion values where the site is physically subdivided or separately occupied by taxable and non taxable uses.

Section 8 Special Valuation on Request of Commissioner

Where no valuation appears on the Valuation Roll, in the case of an estate or interest in land, then there is provision under this section for a special valuation to be made as at 31 March in the year preceding the year of assessment. The two most important factors to note are that the assessment is to be made on a date other than the date applicable to the roll value and under subsection 6 of this section, the roll value itself is not to be altered as a result of the special assessment. It is, in my view this section under which leasehold assessments should be made.

Munroe; Graham is an Asso t;tate of the New Zealand In stitute of Valuers and he has beensenior valuer with Gladding King (previously Cladding, Keys & Neill) in.. Auckland since 1971. FIe has::. contributed significantly 1x. the past to The New Zealand Valuers' Journal and wadi *awarded the Institute prize to 1980 for a series of articles .on shop rental analysis*

Section 9 Mode of Determining Land Value at date other than 31 March

This section suggests that there may be circumstances when the land may be required to be assessed other than as at 31 March in the year preceding the year of assessment. It is required that in such circumstances, values are to be determined in accordance with "this part of the act" but the section does not elaborate any further on the matter. This section contradicts section 5 which requires thattheroll valuebeadoptedas thevalue as at 31 March and gives credence to the possibility that Section 5 is not all encompassing (as implied by that section not being cross referenced to Sections 8 &9).

Section 24 Liability of Mortgagees in Possession

It is not surprising to find that a mortgagee in possession should be liable for the payment of Land Tax (reduced by any amount which may have been paid by the mortgagor), but what is not generally appreciated is that there is provision under this section that "in each of the five years of assessment immediately following the year in which the mortgagee entered into possession, the Commissioner shall assess the mortgagee separately in respect of the estate or interest of which he is deemed to be the beneficial owner". It is not clear whether the term "year" refers to an actual year or the Land Tax year. It is implied (but not explained why) the mortgagee's interest may be different from the owner's interest. There is no statutory method for undertaking such an assessment. (see also Sections 49,50).

Section 28 Reduction of Tax in Certain Cases

A tax advantage is given to a certain narrow range of land owners (with Maori land being dealt with separately in section 29, with either full or partial exemption). There is an obvious taxation advantage conferred upon some institutions by comparison with others.

Section 45 Objections to Assessments

In general, a right of objection exists to any assessment unless the assessment is discretionary or is subject to the recommendation of any special committee, tribunal or authority or is a valuation or apportionment made by the Valuer General under the Valuation of Land Act 1951 or the subject Act.

Section 49 Recovery of Tax from Persons other than Owner of Land

Recovery for non-payment of tax by the taxpayer is provided for under what appear to be draconian terms and conditions. Outstanding tax may become a charge on the land under the following Section 50. Unpaid Land Tax is payable on demand from the following, who became "personally liable in the same manner as the tax payer".

a. A successor in title
b. A tenant of the land
c A mortgagee of the estate or interest in respect of which the tax was assessed.

I have used the term "draconian" in describing this section as the liability of the parties has not been limited in any way. For example, it is not clear whether a minor tenant occupying only part of a building on site is liable for payment of tax in excess of his rental or merely his proportionate liability for rental and any land tax commitments he may have as an "outgoings" charge. Similarly it is not clear whether the mortgagee is liable for the payment of the whole amount of Land Tax if such tax exceeds the net income receivable from the property (see next clause).

Sections (49 & 50) Commentary:

Various complicated provisions exist under Sections 49 (2) & (3) of the Act relating to the liability of mortgagees. The Commissioner is able to give a default notice to any mortgagee who has failed to comply with the requirements of sub-section 3. Once a compliance notice has been given, if a power of sale is later exercised over the land, the mortgagee becomes personally liable for the land tax "to the extent of the amount referred to in Section 104 (d) of the Land Transfer Act 1952". This relates to any surplus being paid to the mortgagor and it would seem therefore that in those circumstances, the mortgage debt has priority over land tax. Section 49 (3) requires a mortgagee intending to exercise a power of sale to give the Commissioner one month's notice in writing prior to sale.

Under Section 50, the Commissioner is able to register a charge on land for arrears of land tax and he would presumably undertake this after having received a notice of compliance in accordance with Section 49 (3). Confusingly, Section 50 (4) says that a registered charge ranks equally to any charge created by any other Act. On the other hand Section 50 (8) obliges the Commissioner to release the charge without payment where the mortgagee has exercised its power of sale. Contrast that statement with Section 50 (3) which provides that there shall be no disposition of any estate in land while a charge remains registered under Section 50.

The effect of these provisions is difficult to ascertain and although the Department appears to hold the current view that on mortgagee sale, the mortgagee is not liable for any additional debt, a change of view within the department could occur, at which time the matter will then need to be tested in court.

52 Refund of Excess Tax

This section provides for the refund of overpaid tax in a number of different circumstances, probably the most common, following the successful objection to an assessment. (Tax may become payable before values can be agreed in any particular year). There is no provision for interest payment in favour of the successful objector/tax payer whereas there is an immediate penalty for late payment in favour of the Commissioner.

Commentary (Leasehold Interests).

Although leasehold interests are mentioned in the Act, there is not specific reference which would assist either the Inland Revenue Department or the tax payer in calculating tax liability. This legislation therefore differs greatly from the best overseas legislation of similar type where there would invariably be specific sections dealing with definitions, liability, exemptions and other matters relating to this class of tax payer and most importantly there would be specific directions to valuers, limiting the need to introduce "opinion" by providing computative formulae.

Commentary (General):

From those few sections of the Land Tax Act discussed above, it is obvious that the Act has always required major revision in addition to those revisions necessary to overcome anomalies. There is varying treatment of different owners and land users which the tax does not treat equitably. AT 2% there was a high incidence of taxation as a proportion of the value of the asset taxed (by comparison with the inherent yield which that asset could achieve) within the Central Business Districts of Towns and Cities throughoutNew Zealand. Many of these matters were addressed in the budget speech of the honourable David Caygill, Minister of Finance (made on July 27 1989). In his speech it was admitted that this is currently the only central government annual tax on the stock of wealth.

Land tax would be said to represent a quasi-nationalisation of part of that asset (to the extent that the income is removed from tax payer to central government). The tax is selective and has the effect of acting as a disincentive to investment. The tax is also based on a gross and often unrealisable value (insofar as

The Grass Roots: NZ Dairy Farming Industry

by David Pilkington

The NZ Dairy Industry is characterised by a co-operative structure whereby the dairy farmers co-operatively own the manufacturing dairy companies which process raw milk into an ever increasing array of products.

The manufacturing dairy companies in turn own the assets of the NZ Dairy Board which now total in excess of $2.6 billion and include in excess of 40 overseas subsidiary and associate companies. In the main, these companies are involved in the distribution and marketing of NZ diary product, but their activities extend into further processing, as well as marketing and processing of other people's dairy products. They range from companies like Sovenze our Soviet Union subsidiary which is actively involved in trading a wide range of products (including non-dairy products) to companies like Soprole who is the largest processor and marketer of a full range of milk products in the Chilean market.

All of these operations are aimed at maximising the income of NZ dairy farmers by:

1 Ensuring New Zealand's milk is produced and converted efficiently into the most profitable mix of products;
2. Marketing New Zealand dairy products to achieve the best long term returns.

This all sounds fine and you may be excused from asking why is the Dairy Industry continually faced with ups and downs in the marketplace and perhaps more importantly from the farmer's perspective why do farm values and cow prices fluctuate wildly.

The short answer lies in the nature of the international market and hence the extremely volatile international prices for dairy products. Before investigating some of these trends I would like to explain the workings of the international market so that you may begin to understand the reasons for the volatility. See Fig 1 over page

Firstly, it is important to understand that of the world's total milk production almost 95% is consumed in the country in which it is produced and only 5% is internationally traded. The Soviet Union, for example, is the largest single milk producer and actually produces more than 14.5 times the milk we produce in New Zealand. Even countries such as India produce 2.5 times more milk than we do. In total we produce only about 1.5% of the total world milk.

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This paper was given to the NZInstitute of Valuers Annual Conference atNew Plymouth on 23 *April 1990.*

The Land Tax Act & Leasehold Interests

continued from previous page

the latter is based on theoretical redevelopment rather than actual land usage) and takes no account of the tax payers' equity (being land value minus mortgage(s) and other commitments). The tax and its associated compliance costs are themselves tax deductible and consequently the net income to Inland Revenue is typically about one third less than the gross amount of the tax. The income goes into the consolidated fund and is not used to directly benefit the tax payer.

Conclusion

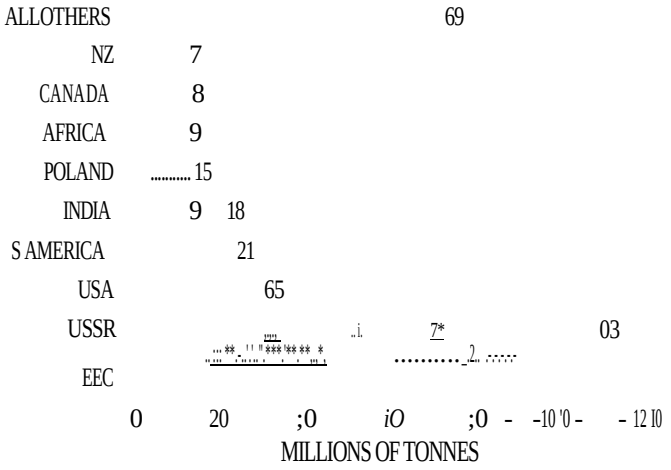
Itis apparent that the Act was never drafted with the thoroughness necessary for either the application of the tax by Inland Revenue or compliance by the tax payer and it is well overdue for total revision. It is furthermore a tax which is subject to debate on grounds of moral equity but that of course is another matter.

In the meantime an attempt must be made to use the Act and its Amendments as a statutory basis for calculations of lessee/ lessor interests and I would suggest that this would lead inevitably to the adoption of Section (8), where a special non roll valuation must be calculated as at 31 March in each year and calculations of the interests of each party made on that assessment which, in the absence of any statutory methods of calculation should be fully market oriented.

The leasehold interests should be based on the present worth at the time of assessment of current and future income and not the apportionment of a theoretical redevelopment or "highest and best use" land value calculated at the time of a proper revision. Even for the freeholder, the value of an "Owner's Interest" could well differ from the "roll value" for the purposes of Land Tax.

Because of the variety of different leases encountered throughout New Zealand, it will not be possible to come up with a simple formula for assessment but it will nevertheless be necessary to make the attempt in the near future, on the grounds of fairness, justice and simplicity. There could well be a valid case for zero rating any lessee's interest but in any case, suitable formulas would still need to be produced in order to allow for the assessment of lessor's interest in the case of a leasehold property. A

FIG 1 WORLD MILK PRODUCTION



What is different aboutNew Zealand is thatmost of whatwe produce is exported.

FIG 3 EXPORT

43.OOX
EEC

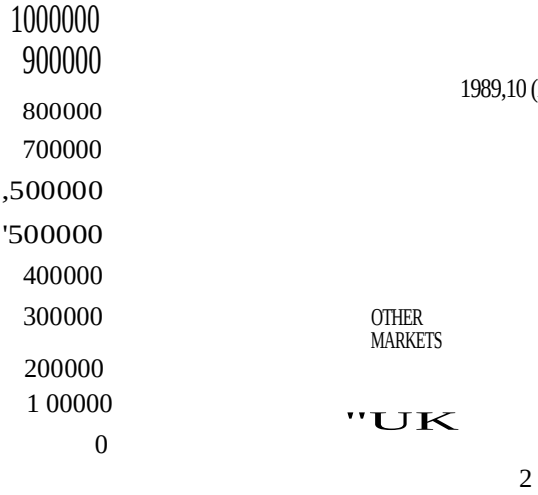
NEW ZEALAND
1 8.00%

New Zealand is the single largest player in the international market and together with the EEC we dominate world trade. Our industry is a very efficient producer of bulk commodity dairy products. We make them for relatively low cost, of good quality and we sell them efficiently. We have become the envy of most dairy exporting countries andgrudgingly admired by the world's dairy traders. But there is no great secure future from being the world's biggest and best dairy product trader.

Commodities by definition are at the mercy of violent price swings depending on supply. Anonymous bulk commodities are at the mercy of raw material users who can choose from a number of supplier sources.

There are few countries that consistently enjoy high national incomes by relying on bulk commoditiesJbis is still true even for oil. New Zealand is a commodity producer and has slipped from about third highest income in the world to about fortieth. To complete the picture Fig 4 shows who the major importers are.

FIG 2 New Zealand Dairy Expods



IMPORT

3% OTHER, W EUROPE

77% MIDDLE EAST, LATINAMERICA AFRICA, ASIA

One can see the danger of relying on the international market for a living if one considers that a 7% swing in SovietUnion milk production equates more than New Zealand's total annual exports. You can imagine what happens to international prices given these circumstances.

Obviously it is the industry's strategic objective to move more of our products out of the bulk commodity area into

FIG 5 International Price Trends

DAIRY PRODUCTS

.nn
19A 197i 1974' 197'6 1478 1`980 1982 '1984 ' 1986 ' 1988

branded consumer products and specialised food ingredients. We are making considerable progress in this area, but we are still highly dependent on the sales of bulk commodities and to a significant extent still dependent on gaining on-going access to the United Kingdom for significant quantities of butter.

To turn more specifically to the farming end of our business and the impact the volatile international market has on payout and hence on what the farmer receives by way of cents a kilogram milkfat payout. The general trends of what is happening to dairy farms in New Zealand is illustrated by Figures 6&7.

HERD SIZE DISTRIBUTION

HERD SIZE

Fig 7 NO. OF SUPPLIERS VS AVERAGE HERD SIZE

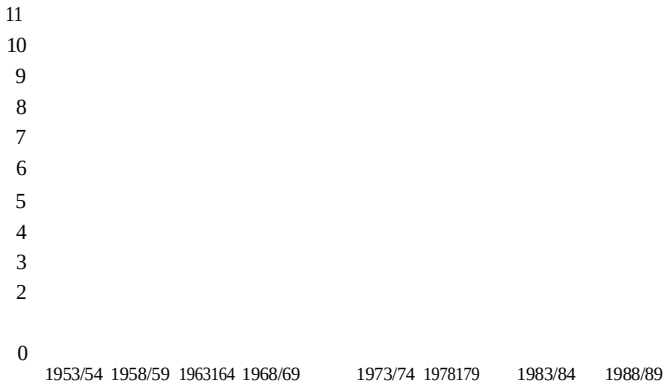
Figure 8 (below) shows the advances in milkfat production per cow. Figure 9 (in next column) shows the major locations of dairy farms in New Zealand. Figure 10 illustrates the milkfat payout to dairy farms and provides an historical picture dating back over the last 30 years or so.

MILKFAT PRODUCTION PER COW

Fig 9 REGIONAL DISTRIBUTION OF DAIRY FARMS

Fig 10:

MILKFAT PAYOUT TO DAIRY FARMERS
($/Kg Milkfat "On the Farm")



Quite clearly prior to the 1970s payouts to dairy farmers were quite stable. This also coincided with the period where approximately 90% of our products were shipped to the UK prior to their joining the Common Market in 1973.

In this sense NZ was somewhat isolated from the volatility of the international market proper. Through the 1970s we enjoyed a period of significant year on year increase in payout. While inflation was certainly eroding the spending power resulting from these increased payout levels, other factors were compensating farmers. These factors included the increased size and efficiency of dairying operations and of course rapid increase in capital values of dairy farms.

This trend continued on into the early 1980s when, with mounting stockpiles of dairy products in the community, international prices began to deteriorate and milkfat payouts declined significantly. It is worth pointing out here that theindustry's own system of stabilisation has helped smooth the effect of the sudden international price drops. However, today the Board operates without access to low cost Reserve Bank financing and is hence more vulnerable to the swings in the international market.

FIG 11: HISTORICAL SERIES

Summary of freehold dairy farm units sold in the open market

Year Ended December	Average Sales Price Per Hectare ($/Ha)	Average Sales Price per Kg Mf ($/Kg)
1969	647	3.70
1970	734	3.73
1971	736	3.62
1972	808	3.84
1973	969	4.74
1974	1406	7.03
1975	1702	8.44
1976	1809	8.04
1977	2117	8.66
1978	2056	8.59
1979	2411	9.69
1980	2659	11.19
1981	3686	14.84
1982	5380	21.23
1983	5507	20.38
1984	6165	21.90
1985	6009	21.04
1986	5377	18.37
1987	5097	16.84
1988	5018	15.99
1989	5542	17.85

Figure 11 (above) shows the almost directly corresponding link between milkfat payouts and average sales prices for farms expressed per kilogram of milkfat production. Again, up until the early 1970s prices for farms were relatively stable and it wasn't until post 1973 that we started to see significant upward movements in farm values, expressed in $/hectare or $/kg milkfat payout.

Figures 12 & 13 look at the value of dairy cows and the lfuctuation in prices that have occurred in stock over the last three years or so.

Given the average herd size of just under 170 cows, the total average farmer investment in stock is substantial.

Figure 14 in particular shows the variation in cow prices in the course of the 1988/89 season. Although the opening price and closing price of cows in milk has remained reasonably stable, there have been considerable variations throughout the season particularly from the period January 1989 onwards as farmers anticipated higher milkfat prices for the 1989/90 season and beyond and this in turn is reflected in young dairy stock values.

I suspect the figures for farm values and stock prices, being average figures, understate the extreme fluctuations that exist out there in the industry, particularly in some of the concentrated prime dairying areas such as the Waikato and parts of Taranaki.

FIG 13: DAIRY COW VALUES

Month		6 wks-lYr ($)	1-2 Yrs ($)	2+ Yrs ($)
1988	Jul	450	590	715
	Aug	380	530	680
	Sep	430	580	720
	Oct	480	620	800
	Nov	480	620	800
	Dec	480	600	800
1989	Jan	500	630	820
	Feb	530	730	950
	Mar	530	730	920
	Apr	540	750	930
	May	730	930	1,100
	Jun	700	900	750

FIG. 14: PRICES RECEIVED FOR MILK

AVERAGE DAIRY COMPANY PAYOUT

Season	Dairy Board Final Price ($)	Advance ($)	Deferred ($)	Total Payout ($)	Inflation Adjusted Payout ($ Dec'88)
1974115	1.36	1.07	0.23	1.30	7.07
1975/76	1.41	1.13	0.31	1.44	6.77
1976/77	1.53	1.19	0.33	1.52	6.18
1977/78	1.67	1.38	0.33	1.71	6.02
1978/79	1.73	1.50	0.29	1.79	5.73
1979/80	2.08	1.71	0.42	2.13	5.85
1980/81	2.65	2.14	0.50	2.64	6.24
1981/82	3.33	2.77	0.62	3.39	6.93
1982/83	3.61	3.02	0.65	3.67	6.51
1983/84	3.50	3.04	0.60	3.64	6.23
1984/85	3.96	3.37	0.69	4.06	6.35
1985/86	4.00	3.19	0.79	3.98	5.40
1986/87	3.31	2.96	0.58	3.54	4.06
1987/88	3.60	3.36	0.71	4.07	4.26
1988/89	5.30	4.74	0.97	5.70	5.70

The Future?

So where are we heading in the future. Obviously, with the volatility of the international market it is very hard to predict with a degree of certainty where international prices are going to go.

While current international prices are set on the basis of foreign government's subsidy levels as opposed to real cost of production, a stroke of the pen in Brussells can have an immediate and drastic impact on international market prices. This makes it extremely difficult for farmers to plan and budget effectively.

Having said that, it is evident that New Zealand dairy farmers have a significant ability to reduce on farm costs particularly over a limited period. For example, the application of fertiliser can be reduced or eliminated in any one season without too great a long term effect.

Similarly, farmers can cut back on casual labour in favour of additional family labour input. Other costs such as artificial breeding can also be reduced.

So, enough beating about the bush. What is going to happen in the future to milkfat payouts and what can we expect in the way of farm prices.

Firstly, there has been a commitment over the past two-three years, on the part of the EEC and the US to address their over production of milk and the current GATT round is a further positive step towards the reduction of subsidies and the elimination of protectionist market philosophies.

We are currently facing a situation where international stocks of dairy products are as low as they have ever been and on this basis the medium to long term outlook for dairying in New Zealand must continue to be positive.

Having said that, butter certainly looks like being a longterm problem for us. Almost universally around the world markets, the consumption of yellow fat is declining and there is no new use or new market that looks like immediately filling the gap left by declines in the major developed markets. We in New Zealand produce far too much butter for comfort and we are endeavouring to reduce the proportion of our milk processed into butter in favour of wholemilk powder and cheese.

The current downturn that has occurred over the last six months or so in the international market has been caused almost solely by a decision on the part of the Soviet Union to delay their annual butter purchases.

This has had the effect of dropping the international prices of butter from around $US 1900 at tonne to levels below $US 1500 per tonne.

It has also had a flow on effect to other products whereby skim milk powder has dropped from $US 2000 a tonne to around $US 1600 per tonne FAS level.

The marketplace as a whole has been particularly quiet over the first six months while major buyers have waited on the sidelines to see what impact the Soviets would have on the international market.

Given the low international stock levels, a return in force by buyers could in fact quickly reverse the current downward trend in pricing.

Notwithstanding, it is expected that the prices paid for milkfat in the coming 1990/'91 season will be below the final price paid by the Dairy Board this season

Already the word is starting to get out and we are seeing declines in cow values and I suspect farms priced in the Waikato around the $30/kilogram milkfat mark and beyond will have difficulty selling.

Looking even further out into the future, we have a very sound industry in New Zealand. It is extremely efficient by world standards and we have marketing network that is second to none.

If one believes in the longterm trend away from subsidised economies then New Zealand is well poised to continue to build on its very strong international position.

These factors alone, in my view, will ensure that dairy farming remains an attractive alternative land use in New Zealand and while dairy farmers will decrease in number and farms become bigger, the industry has invested for the longterm and is well placed to continue to dominate world trade for some considerable time to come.

One issue that is still to be addressed by our industry and an issue that could well have an impact on farm values is that of so called entitlements to supply.

Currently all one has to do to tap into the assets of the industry is to buy a farm and begin supplying milk to a local co-operative.

These fixed assets of the industry are currently estimated to be around NZ$90,000 per farmer. There has been a suggestion that a value reflecting these assets ought to be capitalised into the value of farms and that an entitlement to supply a certain co-operative would stay with the farm when it is sold.

This is an issue that individual dairy companies will need to address and no doubt there is considerable debate ahead of us as to such a scheme. A

v' hi I III

Regression Analysis for Valuers

by S W G Binnie

Part 1: Simple Linear Regression

INTRODUCTION

Regression is the name given to the calculation of a best-fit' line through data points showing the relationship between two variables. This best fit line is expressed as a mathematical equation in terms of X and Y, and can be represented as a simple two axis graph.

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Figure 1: Graph showing regression line

In the above example the two related variables are Site size and Price. These variables are shown to be related by the obvious linearity between the data points.

The regression line (once calculated) expresses this relationship in mathematical terms.

$$Y=mX+C$$

Where M = the gradient of the line (coefficient of X)
C = The Y axis intercept (The Constant)
Y = the dependent variable (the variable we are trying to predict)
X = the independent variable(the variable upon which the prediction is based)

THE METHOD

The objective is to mathematically fit a line whose equation is in the form

$$Y=mX+C$$

That is, we must find a formula for the slope m and intercept C. In fitting this line, a reasonable objective is to keep the deviations of the data points from the line as small as possible. Initially we might try to minimise the total amount of deviation for all data observations but because some of the points are above the line and others below, some deviations will be positive and others negative. To the extent they cancel, they will make the total deviation deceptively close to zero. To overcome this "positive-negative" problem we first square the deviations to make them all positive, and then sum them to obtain the least squares criterion.

The formulas used to achieve this objective are as follows

$$m = \frac{YXY \quad n\ XY}{E\ X2 \quad n\ X2}$$

$$c = Y\text{-}m\ X$$

A WORKED EXAMPLE

We must collect and tabulate the data; the following data relates to a sample of land sales:.

	Sale price	Area		
n	Y	X	XY	X2
1	45000	820	36900000	672400
2	28500	540	15390000	291600
3	64000	1160	74240000	1345600
4	37000	635	23495000	403225
5	51500	960	49440000	921600
6	41000	760	31160000	577600
7	65000	1285	83525000	1651225
8	32500	601	19532500	361201
9	25000	485	12125000	235225
10	58500	1012	59202000	1024144
E	448000	8258	405009500	7483820
Averages	44800	825.8		

$$M = \frac{405{,}009{,}500}{7{,}483{,}820} \quad \frac{10(44800)(825.8)}{10(825.8)(825.8)} \quad \frac{44{,}342{,}137}{1{,}893{,}600{,}000}$$

$$m = 52.7589$$

$$c = Y - m X$$

$$c = 44{,}800 \quad 52.7589(825.8)$$

$$c = 1231.70$$

The Regression equation Y=m X + C becomes therefore:
Predicted Price (f) = *$52.76 x (area) + $1231.70*

The equation can now be used to give a prediction of price ('Q) fora given site area (X). For example, what is the predicted selling price of a site having an area of 870m2.

If we substitute 870m2 for X in the above equation we have:

Price (�) = 52.76 (870) + 1231.70
Price $47,132.90

Validation (or "how accurate is my regression?")

As mentioned earlier the data is unlikely to give a perfect straight line for a variety of reasons (for now we will assume that the difference is 'Error'). We can calculate how much of the deviation in the data is 'explained' by the regression by calculating the coefficient of determination of r2 figure which is the ratio of deviation explained by the regression as a proportion of total deviation, i.e. an r2 of 1.0 indicates a perfect fit and an r2 tending towards zero indicating that the data does not follow the calculated regression line at all. eg. no trend evident from the data.

This r2 coefficient of determination can be calculated as follows:

$$r2 = 1 - \frac{E(Y - \hat{Y})2}{I(Y-Y)2}$$

To apply this formula we need to add some more columns to our data table.

I Y-1X	(Y4 X) 2Y-Y	(Y-Y)2
44494	506	256038	200	40000
29722	-1222	1492070	-16300	265690000
62432	1568	2458536	19200	368640000
34734	2266	5136570	-7800	60840000
51880	-380	144587	6700	44890000
41328	-328	107888	-3800	14440000
69027	-4027	16215858	20200	408040000
32940	-440	193421	-12300	151290000
26820	-1820	3311538	-19800	392040000
54624	3876	15025630	13700	187690000
1		E		1893600000
448000		44342137		

Thus it can be seen that the single variable 'area' accounts for 97.7% of the variation in sale price for this sample. The other 2.3% must be accounted for by other variables (e.g. view, contour etc) or normal market variations.

This is obviously quite a good regression model.

CONFIDENCE INTERVALS

What degree of certainty can we have that the estimate lies within a specific range, or what range of values will our estimate have, given a specified degree of certainty?

Those of you who have studied elementary statistics will remember how we calculate probability of an event occurring by using "Z" tables (assuming a normal distribution). Also by taking into account the sample size we can calculate confidence intervals around a mean value by using the "t" statistic (again assuming a normal distribution).

When we look at the regression line we have calculated and the scatter of sample points around it we notice that the further from the line we get, the fewer data points there are, in fact if we look along the line we should notice a normal frequency distribution.

ProbubNlty

Fig. 2 Graph showing probability distributions about the regression line.

By using "t" statistics we can now express a confidence interval for our line of best fit.

Calculations for the confidence interval are as follows:

$$\text{Confidence Interval} = Q \pm t.\ SE.\ \sqrt{1 + \frac{1}{n} + \frac{(x-X}{\text{mm}}}$$

$$n - 2$$

Y = Predicted price of site
t = t statistic based on (n-2) degrees of freedom
SE = Standard error of the estimate

SE =

Continued over page *

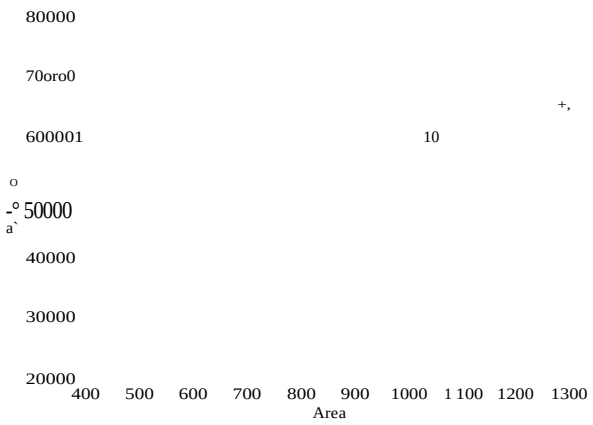

Fig 3: Graph showing confidence intervals as upper/lower limits

Now we will calculate the confidence interval for our value estimate of $47,133 at the 90% level.

X = 870m2

Y = $47,133

Confidence level = 90%

(from statistical tables, 5% in each tail, n-2 d.f.) = 1.86

$$SE = \frac{44,342,137}{10-2}$$

SE = 5,542,767

SE = 2,354

$$Cl = \$47,133 \pm 1.86 \times 2,354 \sqrt{\frac{1}{10} + \frac{(870 - 825.8)^2}{7,483,820 - 10(870)^2}}$$

$$Cl = \$47,133 \pm 1.86 \times 2,354 \sqrt{1,953.64 - 85,180}$$

Cl = $47,133 ±1.86 × 2,354 × 2,776

Cl = $47,133 ±$1,215

Cl = $45,918 * $48,348

Thus our regression indicates that we can be 90% confident that our predicted value lies within the range $45,918 to $48,348

Part 2: Multiple Linear Regression

As the above name implies this is still'straight line, least squares fitting' but it allows the model to use more than one explanatory variable. This is a more useful technique to valuers than simple linear regression as property values are usually affected by a nunber of variables, for example, land area, view, contour, floor area, quality, age etc etc.

The Multiple regression equation is essentially the same as the simple linear regression equation except that it has more independent variables, and more coefficients (slopes or gradients).

$$Y = m1X1 + m2X2 + m3X3 + \ldots\ldots\ldots\ldots + X$$

The mathematics of calculating the regression equation involve matric manipulations of very large numbers which may prove too large for hand held calculators. Moreover, there are numerous statistical analysis programmes for micro-computers that are simple and easy to use thus making the manual calculation of such a formula a pointless exercise. It is with this in mind that we will concentrate on the practical application ofthis method rather than the calculations involved.

STEP 1 THE MODEL

We wish to value a property based upon known sales evidence. We must use our experience as valuers to determine what factors (independent variables) are affecting sales prices in our sales sample. We can initially minimise the requirement for the number of variables by selecting a homogenous sample of sales, ie.by selecting only sales in the locality in which we are valuing the model will not need a 'locality' variable.

The sample we will use is based upon the valuation of a 1950's weatherboard house in Papanui, Christchurch.The comparable sales in the locality would appear to be influenced by the following variables:

Date of sale
Land area
House area
Streetscene
Garages

These are called the independent variables, the dependent variable is 'price'. The regression model being a mathematical technique obviously requires numeric input; this is okay for variables such as house area and land area, but how do we input variables such as quality?

THE DATA

There are three ways of coding data for use in a regression model:

objective
subjective
dummy

i) Objective Variables:

If we believe that the price of a property changes in proportion to a variable that is expressed numericaly, we can input that data unchanged. e.g. House area, Land area.

ii) Subjective Variables:

If the price of a property changes due to the effect of a variable that requires qualitative judgement by the modeller then it is termed a'subjective variable'. Typically this is used for non-numeric data such as 'view' or 'house quality'.

It must be stressed that this is a subjective or qualitative input, not simply a ranking, for example.

	Quality
House 1	55
House 2	40
House 3	65
House 4	50

The above shows a true subjective judgement.
If we were to simply rank the variable:

	Quality
House 1	3
House 2	1
House 3	4
House 4	2

then we are indicating to the model that house 3 is four times better quality than house 2! This is obviously incorrect.

iii) Dummy Variables

These are variables that can have two values 0 or 1 representing 'yes' or'no', for example, corner site, rear site, two storey house.

DATA RULES

(a) The explanatory variables must be independent i.e. no strong relationships between them, an example of strongly correlated variables could be 'locality' and 'house size'; these two might logically go hand-in-hand, but such correlation could 'confuse' the regression model into making a large variation to price based upon house size when in fact locality is causing the variation (or vice versa). This results in a regression model that is unreliable.

(b) the Regression calculation will fail to arrive at an answer if any one variable is represented by 0 'zero' for every observation.

(c) the Regression calculation will fail to arrive at an answer if the number of properties in the sample does not exceed the number of independent variables i.e. if you are using 10 variables, you must use 11 comparable sales (or more).

Note; for acceptable 'statistical validity' there should be at least 10 sales for each independent variable used.

This is quite often impossible in practice, and while a small sample may give a realistic prediction of value the confidence limits of the prediction will be very wide.

AN EXAMPLE

The following multiple linear regression uses real-life data in the valuation of a 1950's weatherboard bungalow in Papanui, Christchurch.

The statistical analysis programme used is Statistix II although there are many packages to choose from and each of them give similar output. The sales data below was entered into the regression package.

As you can see we have entered Price, Land area, House area and number of garages as objective variables. Date has been entered as the age of the sale in months, ie. 7 = seven months old. and Quality and Locality have been entered as subjective variables based upon the valuer's judgement; in this case on a 1-100 scale.

	DATE	LAND AREA	HS.AREA	QUALITY	LOCALITY	GARAGES
DATE	1.0000					
L.AREA	0.2215	1.0000				
HS. AREA	0.1187	0.1198	1.0000			
QUALITY	-0.3182	0.3102	0.3230	1.0000		
LOCALITY	-0.0904	0.0697	0.4351	-0.0905	1.0000	
GARAGES	0.1160	0.0160	0.1361	0.4839	-0.1791	1.0000

CASES INCLUDED 14 MISSING CASES 0

We must now check to see that no two independent variables are too highly correleated (refer to (a) on the previous page).

In the above simple correlation table we can see that "GARAGES" has a 0.4839 correlation with "QUALITY", and "HSAREA" has aO.4351 correlation with "LOCALITY". These correlation figures are moderate and are of no immediate concern, the smaller the correlation the better, generally anything below 0.5 is acceptable.

THE REGRESSION

The next step is to regress price against the independent variables:

UNWEIGHTED LEASTSQUARES LINEAR REGRESSION OF PRICE

PREDICTOR VARIABLES	COEFFICIENT	STD ERROR	STUDENT'S	Ie
CONSTANT	-51127	19273	-2.65	0.0328
DATE	-1200.3	517.47	-2.32	0.0534
LND AREA	17.004	8.2265	2.07	0.0776
HSAREA	433.99	64.370	6.74	0.0003
QUALITY	707.07	265.10	2.67	0.0321
LOCALITY	927.90	310.97	2.98	0.0204
GARAGES	-2563.5	1976.6	-1.30	0.2358

CASES INCLUDED	14	MISSING CASES	0
DEGREES OF FREEDOM	7		
OVERALL F	32.24	P VALUE	0.0001
ADJUSTED R SQUARED	0.9352		
R SQUARED	0.9651		
RESID MEAN SQUARE	11700000		

CASE	PRICE	DATE	LAND AREA	HS.AREA	QUALITY	LOCALITY	GARAGES
1	100000	6	880	140	68	48	2
2	63000	11	607	110	45	48	1
3	71500	10	600	110	56	45	2
4	76000	9	630	110	59	45	1
5	69500	9	819	100	61	38	2
7	81000	8	789	120	57	43	1
8	93000	4	610	120	58	48	0
9	93500	10	1024	120	55	50	1
10	89000	7	493	130	58	48	2
11	72000	4	703	90	52	48	1
12	101000	4	647	140	64	48	2
13	90500	9	645	150	48	48	1
15	102500	11	819	160	62	48	2
16	70000	7	622	110	55	38	1

1 Statistix II is an analytical package designed for use on microcomputers written by NH Analytical Software (USA).

The above output from our computer package needs some interpretation in order to establish if our regression model is sound:

The Coefficients are the gradients/slopes relating to each of the independent variables, and the constant is the intercept on the Y axis (the graphical representation becomes very hard to conceptualise with multiple regression) the regression equation in this case is:

$$I = 51{,}127 - (1200.30\text{'Date}) + (17.004\text{'Lndarea}) + (433.95\text{' Hsarea}) + (707.07\text{'Quality}) + (927.90\text{' Locality}) (2563.5\text{'Garages})$$

From this alone we can deduce that the model is not entirely successful due to the negative coefficient for "garages" which is of course nonsensical.

We can scrutinise the students "T" values for each independent variable calculated by the regression; they are the coefficient divided b y the standard error and represent a weighted or standardised error measure.

They should be greater than the T critical value found in statistical tables if that independent variable has significant effect on the dependent variable.

In this case the T critical value from tables using 7 degrees of freedom and a 95% interval coverage is 2.365. This would indicate that "Garages " and possibly "Lndarea" have no significant effect on price at the 95% confidence level.

The degrees of freedom used for the T test are calculated as follows:

d.f. = n-k-1 =sample size-number if independent variables-1

The P values (Probability Values) are the confidence levels that correspond to the T calculated values and are the total probability left in both tails of the probability curve (outside of our confidence limit) or the probability that the variable does not affect price. Obviously 1- P value is the probability that the variable does affect price.

The'F'ratio is the ratio of explained variance to unexplained variance and relates to the significance of the regression model as a whole in predicting price.

It should exceed the F critical figure from our statistical tables. When looking up F critical values we use the following degrees of freedom:

d.f. (numerator) = c-1 = no. of independent variables-1
d.f.(denominator)=c(n-1)=no. of ind variables. (sample size 1)

Therefore in our example the F critical figure using 5,78 degrees of freedom and a confidence interval of 95% = 2.37.

This figure is exceeded by the F calculated value of 32.24 which indicates that the model as a whole is statistically valid at the 95% level of confidence. The prob value next to the F calculated figure is again the probability left in the tail of the F probability curve and indicates the probability of the model not being significant. If we now use this model to predict a value we get these results(adjacent).

PREDICTED/FITTED VALUE OF PRICE	82560		
SE(FITTED VALUE)	4447.1		
LOWER FITTED BOUND	72045	UPPER FITTED BOUND	93076
SE(PREDICTED VALUE)	5610.4		
LOWER PREDICTED BOUND	69294	UPPER PREDICTED BOUND	95827
UNUSUALNESS (LEVERAGE)	1.6903		
PERCENT COVERAGE	95.000	CORRESPONDING T	2.3646

PREDICTOR VALUES: DATE =0.0000, LNO AREA=625.00 HSAREA =107.00, QUALITY = 49,000, LOCALITY = 48.000, GARAGES = 1.0000

Obviously, because of the nonsensical coefficient and poor T test associated with the "garages" variable, we should remove this variable from the model thus improving our point-prediction accuracy and freeing up on degree of freedom, thereby pulling our lower and upper predicted values together.

The upper and lower bounds indicated are based on the classical statistical hypothesis tests and look too wide to be useful, this is saying that we are 95% certain that the true value lies between these limits.

This classical interval coverage is not truly indicative of the potential accuracy of the regression as shown by the following table:

CASE	PRICE	FITTED	PERCENT
1	100000	100287	0.2859
2	63000	62587	-0.6597
3	71500	71819	0.4438
4	76000	76336	0.4402
5	69500	69257	-0.3506
7	81000	81055	0.0678
8	93000	92912	-0.0943
9	93500	93405	-0.1013
10	89000	88842	-0.1773
11	72000	72143	0.1976
12	101000	100640	-0.3575
13	90500	90878	0.4154
15	102500	102339	-0.1576
16	70000	70000	0.0000

The above table shows the observed PRICE and FITTED price (the price that our regression predicts should have occurred) for each of the sales in our sample, the PERCENT column is the percentage difference between them.

As you can see, our predictions would appear to be very accurate, and far more accurate than the interval coverage for our prediction would indicate.

From a pragmatist's point of view the above test of a multiple regressions potential for prediction accuracy is probably the best we can do, although it should be pointed out that for the above test to be entriely acceptable from a statistical viewpoint, we should use a different sample of sales from the sample used to calculate the regression.

This technique of holding back sales from the regression in order to prove the regression fit is an anomaly as we have so few sales it would be more productive to use the sales to give the regression more accuracy!

It would appear that the above test and an acceptable r2 figure give the best indication of the likely accuracy of the predicted value and that the classical interval coverage is too harsh in its criteria.

continued opposite page

Part 3: Curve Fitting

Linear regression in all its forms is a least squares straight line fitting technique that is useful for predicting straight line relationships. But as valuers we know that a majority of the price/ variable relationships we encounter are not straight-line. For example:

Price / Land Area
Price / House Area
Rent / Lettable Area.

The relationships above are a small example of the many that are affected to some degree by diminishing returns to scale and trying to fit linear regression lines to these obviously non-linear relationships is inappropriate and leads to limited predictive accuracy.

There are many different types of curve that could be fitted to non linear data; logarithmic, exponential, power and trigonometric functions are useful for fitting non-linear functions of known curve type in a simple regression formula. However, when using a multiple regression equation, it is simpler to use a multiple polynomial equation because it is flexible in its curve type and simple to apply.

Multiple Polynomial Regression

Although the name looks intimidating, the approach is very simple. It is the use of the multiple regression technique to solve for multiple powers (polynomials) of the same independent variable instead of the usual multiple variables.

For example

$$Y=mX+C$$

$$\text{Price} = 15.5\,(\text{land area}) + 15000$$

This shows a straight-line relationship with a line gradient of 15.5 units and a Y axis intercept of 15000 units. The X (land area) could be referred to as a polynomial of degree 1. ie. X to the power of 1.

If we add a polynomial of degree 2 to the equation (ie. X to the power of 2) we would get a curved line:

$$Y=m,X+m2X2+C$$

$$\text{Price} = 12.5(\text{land area}) + 1.6\,(\text{land areaa})2 + 8500$$

This equation shows a curved relationship in the form of a quadratic equation.

You can see from the equation that we are using multiple regression to solve for multiple coefficients of X (ie ml and m2) but that the independent variables are derived from the one variable 'land area'.

By using more polynomials in the equation, we can fit almost any simple curve, for example:

$$Y=m,X+m2X2+m3X3=m4X4=+C$$

It should be pointed out, however, that as with 'normal' multiple regression, each of the independent variables uses one degree of freedom, thereby reducing the predictive accuracy of the model, whereas each extra polynomial used improves the curve fit in increasingly subtle increments.

I have found that it is rarely necessary to use a polynomial exceeding degree 3 (X3)

The method is applied by creating extra independent variables in the data set used in the regression by squaring or cubing the data applying to the independent variable (this is termed "transformation" of data.)

Having introduced multiple polynomial regression, it can now be shown in its most useful context; within a multiple regression equation relating price to multiple independent variables, and multiple polynomials of any variables the valuer considers have curved value relationships.

A multiple regression of the variables that affect the price of a residential site gives a good example:

Price as a function of:
- Area) estimated to be a
- Area 2) curved relationahip
- Date of sale
- Streetscene
- Location
- Shape

Estimated to be linear relationships.

Conclusion

The above valuation methods apply equally well to mass appraisal situations and one-off valuations, the drawback in uisng regression to perform one-off valuations is the time required to collect data and to perform the regression, in a competitive market environment, this time can ill be afforded and the traditional methods of valuation would appear to be adequate.

In applying regression to mass appraisal, difficulty can be found in getting consistent input of subjective data from the numerous staff involved and also in training staff in the interpretation and application of the results, nevertheless it is in the arena of mass appraisal that regression techniques provide the most benefit by using a single valuation model that covers a large number of properties.

Regression has been shown to work exceedingly well in localities predominated by 'group' housing, and depending on the quality of data input, has worked reasonably well from time to time in less homogenous localities - although a lot less reliably. A

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Compiled by Leonie Freeman

Risky Business: How do YOU Cope?

Steve Binnie takes a look at @RISK: a new add-on package for Lotus-123 users that brings the ability to quantify financial risk in a practical way into the hands of valuers, property managers and investment analysts.

here is a gradual move towards reports that include sales evidence, detailed calculations, detailed investment advice and a range of likely values together with a indication of our confidence in that range.

We should no longer express a single monetary value for CBD commercial properties or large scale redevelopment properties in today's dynamic market.

Most of our clients are not naive about valuation matters and it is becoming more commonplace for clients to ask for upper and lower limits of value and quite rightly so! After all, ask a statistician and they will tell you that it is impossible to give a definitive point estimate of value if we are basing that value on a sample of erratic sales evidence.

When we talk of uncertainty and ranges of value we are in the sphere of classical risk analysis; that is, the calculation of the probability of a value occurring based upon a formula with imprecise (risky) inputs.

Most of you will be familiar with the worst scenario/best scenario interpretation of risk where we perform a valuation or investment analysis using the most likely figures and then re-calculate the analysis with the most pessimistic figures and again with the most optimistic figures.

This type of approach gives absolute minimum and maximum values which in reality are unattainable for it is highly unlikely that all of the uncertain figure used in an investment value calculation will turn out to be low or conversely turn out high!

The truth is somewhere between these figures, the investment return being based upon input figures both high and low brought about by chance in a unique combination.

@RISK works within existing Lotus-123 spreadsheets (for example,astandardincomebudgetandcapitalisation spreadsheet you regularly use for commercial building valuations) @RISK runs the calculations in the spreadsheet using estimates of spread (frequency distributions) instead of the usual point estimates for your variables such as building rental, expense ratios and capitalisation rate, and it recalculates the `answer' or `bottom-line' of the spreadsheet numerous times (hundreds or even thousands of times) each time using a random input for each of the variables weighted for the spread of value specified.

(This technique is called simulation.) It is like running a large number of `what-if' scenarios all at once. The results are displayed in a value probability curve or a table of statistics showing the most likely value together with the probability of other values occurring.

The two types of simulation available in @RISK are'Monte-Carlo simulation' which may be familiar to you if you have studied classical risk analysis, and secondly `Latin Hypercube simulation' which is a modern and more efficient sampling technique than Monte-Carlo giving more reliable results for small numbers of calculation iterations.

For property managers/investment analysts @RISK has the flexibility to run a number of different types of sensitivity analyses by holding one variable constant or running multiple simulations with pre-selected inputs fora variable. It also has the ability to graphically overlay the results of these sensitivity simulations to get an accurate picture of where the risk in an investment lies.

An overly simplistic spreadsheet example follows showing one application of @RISK:

Address: 123 Smith Street
Income Budget

Income		Area	Rate		Gross rent
Ground		650	280		182000
Floors 1-6		2500	135		337500
			Gross rents		519500
Expenses					
Management	519500		4.00%	20780	
Maintenance	4200000		0.60%	25200	
Insurance	4200000		0.33%	13860	
Land tax	560000		1.00%	5600	65440
Cashflow					454060

Capitalise cashflow © 10.50% = CV 4,324,381

This example shows a simple income budget and capitalisation; there are a number of estimates based upon analysis of rentals, experience, typical market rates and analysis of sales. When using @RISK we change these absolute figures to an expression of frequency. In this example the input estimates are as follows:

Variable	usual imput'	@RISK input
Ground FI rent/m2	280	@normal (280,8)
First FI rent/m2	135	@normal (135,7)
Property Management rate	4.0%	@triang (2.5%,4%,5.5%)
Maintenance rate	0.6%	@triang (4%,6%,8%)
Insurance rate	0.33%	@normal (.33%, 0.3%)
Cap Rate	10.5%	@normal (10.5%,0.5%)

@RISK has up to 24 different types of distribution type to choose from; the above example only uses two:

@normal(mean, std dev)...this @ function expresses data as a normal distribution around a mean and standard deviation.

@triang(min, expected, max)...this @ function expresses data in the form of the expected figure and the likely minimum and maximum values.

The `answer' from our standard Lotus 123 spreadsheet is $4,324,381 but the answer from the same spreadsheet using @RISK simulation is displayed as follows:

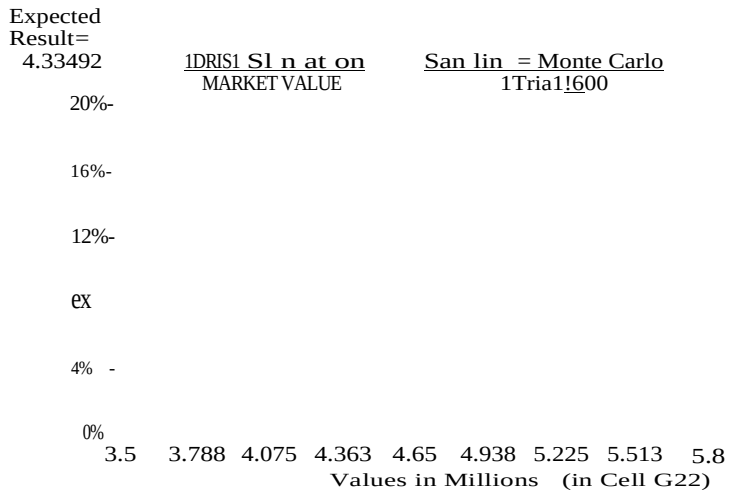

Figure 1: Graphic output from @RISK (discrete probability o value)

The above results came from 500 calculations of the spreadsheet example. If we add the percentages for the four highest frequencies (11+17+13+12) it shows that there is a 53% chance that the value lies between M$4.1 and M$4.45.

Of course, the interpretation of the results is up to the individual but I think that this kind of information can only help rather than hinder the decision making process!

For investment analysis purposes the data can be shown in cumulative form as shown in the adjacent graph (figure 2).

This shows the probability of investment value being above the value shown on the X axis of the graph. The results can also be shown in the form of distribution statistics and frequency tables in text form if required for a report.

The @RISK software supports math coprocessors although runs acceptably fast without it; the above simulation did 500 calculations (iterations) of the above spreadsheet in 1 minute 16 seconds using an AT compatible PC with a 12 mhz clockspeed and no math coprocessor.

The manual supplied is well set out and very detailed being designed for use by non-statisticians using terminology easily understood by management professionals.

As well as excellent technical help the manual has a chapter on modelling techniques/sensitivity analysis and easily understood instructions guiding the newcomer through the excellent on-disk tutorial.

The appendices give an explanation of the modelling techniques used, a glossary of technical terms and further reading references on risk analysis techniques all in all an extensive technical manual aimed squarely at management professionals.

There is no NZ dealership for @RISK at the time of writing although it can be purchased directly from the publishers. The price is approximately $US200. The publishers can also supply a free demonstration disk.

@RISK is available from: Palisade Corporation, 2189 Elmira Rd, Newfield,NYUSA 14867; Phone (607)564-9993. A

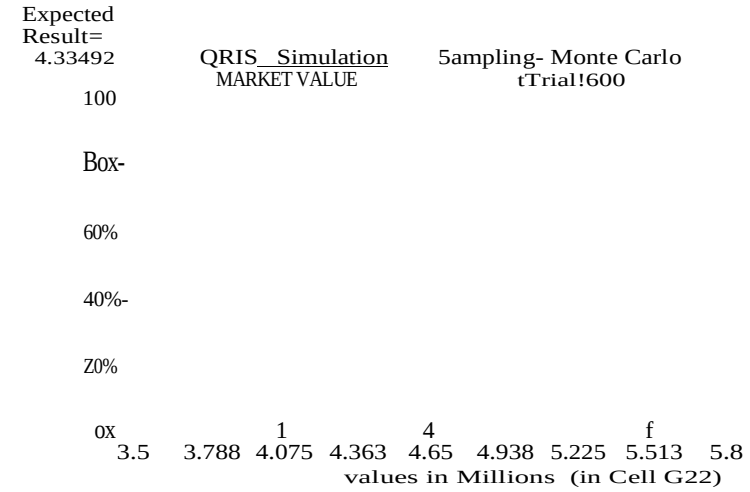

Figure 2: Graphic output from @RISK (Cumulative probability of value)

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An Introduction to Regression Techniques in Valuation

This paper deals with the application of regression techniques to valuation. It addresses some basic connsideations in data analysis and description and deals with the application of linear regression and correlation rechniques to the valuation decision-making process

by J D McFarlane & M J W Fibbens

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The valuer is a data analyst. The role played by the valuer in assessing value necessarily involves the regular examination of quantitative information. Why then have the statistical tools of the data analyst not been embraced by the valuation profession?

Writers on property have, for some time, indicated the need for the profession to adopt techniques which are commonly used in other fields. In 1979 Greer wrote: "...real estate analysts employ methods and techniques which represent the state of the art in other fields a generation ago". Yet, has the situation changed in the following decade? The answer to this rhetorical question is an emphatic "NO" (see Meacham, 1988). There are a number of reasons for this among which the following loom large:

i) the information overload facing the valuer particularly relating to the workload created by a constantly evolving legal framework;
ii) the need forongoing education in other areas of valuation practice;
iii) the need to keep pace with technology and to meet increasingly sophisticated client demands; and, especially,
iv) a dearth of convincing cases being established for the adoption of these techniques.

Basic statistical techniques provide the valuer with the means by which valuation data can be critically examined. These techniques allow the valuer to identify market trends, the relative importance of specific factors affecting value and transactions that may be considered "out of line". It may be claimed that statistical measures form an invaluable aid in market analysis. Contemporary calculator and computer packages provide the means by which these measures may be applied to a wide range of valuation problems.

While statistical analysis, generally, is of relevance in the consideration of property data, this paper will deal with the application of regression techniques to valuation. It will address some basic considerations in data analysis and description and deal with the application of linear regression and correlation techniques to the valuation decision-making process. It is anticipated that this article will be followed by a further two which will extend data analysis into areas such as-multiple regression.

This paper was published in the Australian Valuer April 1989

John McFarlane, B.SC (Hons), M.Stat. and Mike Fibbens, B.Ed., FAJ.V., F.R.EJ.

A number of Australian articles have been written on the applicaton of regression techniques in valuation (Lockwood, 1984; Fraser, 1984; Reynolds, 1985 and Locke, 1987 being among the most recent). In common with most papers published in the US on the subject, these articles have dealt with the application of multiple regression to the mass appraisal of residential property. This application may well be outside the routine, day-to-day work of the average valuer. It is the intention of this series of articles to show that regression is a tool which *every* valuer will find useful in his/her daily practice. It is our intention to demonstrate using simple valuation examples, that regression methods are a powerful tool which every valuer should have at his/her disposal.

What is regression?

Regression is a data analysis technique which is concerned with *the prediction* of one (numerical) variable called the "dependent" variable from known (numerical) values of a group of indicators called the "independent" variables. Regression methods are widely used in business, science, engineering and technology in fact, in any field in which prediction of (future) outcomes is important.

It is not the intended purpose of these articles to provide a general introduction to regression. The interested reader who requires such an introduction should consult one of the general, business, statistical text books listed in he bibliography following this article.

The techniques of linear regression and correlation enable the valuer to examine the way in which individual determinants of value (the independent variables) influence market value (the dependent variable). These techniques parallel the decision-

making process undertaken by the valuer. Thus, factors such as age, area, frontage, date of sale or lease, location, standard of construction and/or finish may be examined.

Data

The examples used in this paper arose from a study relating to rent determinations in a shopping district in which all rentals from three different malls were collected. The study was undertaken so that the important determinants of value could be identified and measured in terms of the influence that they exerted.

Regression techniques were used to analyse, and make judgments on, data relating to the pattern of rent values within the selected study area.

The data was as follows:

TABLE 1
RENTAL DATA FROM THREE MALLS

Mall	Shop	Rental Value($)	Area (M2)	Area $/M2	Frontage (M)	Time (Year)
1	1	17808	51.31	347.07	7.7	85.50
1	2	16674	53.05	314.31	5.9	83.50
1	3	17400	53.05	327.99	5.8	85.75
1	4	6000	8.02	748.13	4.0	85.00
1	5	17528	53.67	326.59	5.3	84.50
1	6	16078	47.73	336.85	5.3	83.50
1	7	15602	48.65	320.70	5.3	83.50
1	8	15105	48.40	312.09	5.3	85.50
1	9	15237	48.34	315.20	5.7	85.50
1	10	17797	66.75	266.62	5.7	84.50
1	11	36295	157.11	231.02	11.4	84.50
1	12	28015	103.22	271.41	6.9	85.50
1	13	21438	67.11	319.45	4.9	84.25
1	14	15900	49.73	319.73	3.5	85.50
2	1	13000	41.87	310.48	5.6	85.75
2	2	15100	54.00	279.63	5.6	85.75
2	3	40585	167.84	241.81	14.0	85.75
2	4	13740	86.22	159.36	7.0	86.00
2	5	13000	41.87	310.48	5.6	85.75
2	6	10000	52.00	192.31	6.3	85.90
2	7	9000	37.60	239.36	6.3	85.80
2	8	6800	37.30	182.31	5.6	86.00
2	9	49200	331.00	148.64	14.0	85.92
2	10	7280	77.50	93.94	7.7	87.00
2	11	7800	96.00	81.25	7.7	87.00
2	12	21207	153.58	138.08	14.0	88.83
2	13	11200	81.20	137.93	7.7	86.50
2	14	9200	50.24	183.12	5.6	86.25
2	15	15200	128.27	118.50	14.0	86.25
2	16	10350	64.10	161.47	8.4	87.00
2	17	7280	77.50	93.94	4.9	87.00
3	1	15641	53.00	295.11	5.1	85.25
3	2	14838	50.00	296.76	5.1	85.40
3	3	16038	50.00	320.76	5.1	84.50
3	4	17640	50.00	352.80	5.5	87.00
3	5	17226	52.90	325.63	5.3	86.75
3	6	26265	115.00	228.39	10.3	85.30
3	7	12316	52.00	236.85	5.1	84.75
3	8	12315	52.00	236.83	5.0	84.30
3	9	12644	52.00	243.15	5.0	86.75
3	10	17596	71.00	247.83	10.0	86.60
3	11	10104	29.73	339.86	5.0	85.25
3	12	12315	52.00	236.83	5.4	85.25
3	13	14831	65.00	228.17	6.8	85.25
3	14	29007	157.93	183.67	16.5	85.75
3	15	19166	83.61	229.23	4.0	85.75

We used this data to arrive at "fair market rent" for the following two subject properties:

TABLE 2
SUBJECT PROPER6TIES REQUIRING VALUTION

Mall	Area(M2)	Frontage(m)
1	81.37	6.7
3	62.90	6.6

Part of the analysis will be to determine exactly which of the data in Table 1 can be regarded as comparables for our "fair market" rental determination.

Model

The form of regression in which we are interested in this article is simple linear regression involving a single dependent variable (annual rental value) and a single independent (or predictor) variable. Under simple linear regression we are making the following assumptions:

i) that, apart from an "error" component, a straight line is the appropriate relationship between the dependent and independent variables;

ii) that the data are symmetrically distributed about this straight line (ie that the "error" term is symmetrically distributed above and below zero); and

iii) that the variation about the straight line is similar for all values of the independent variable homoscedasticity).

The model is usually written

$$Y = a + b X + \text{"error"}$$

where Y is the dependent variable; X is the independent variable; a + b X is the straight line component with a and b unknown constants to be estimated from the data; and the "error" term has zero mean and standard deviation constant for all values of X. The application of this formula (model) is illustrated below.

Of the listed assumptions, the most critical is the first, the straight line assumption. In the above example, this means that if the independent variable of interest is shop area, then we are asserting that an increase of Im2 in area will be associated with a similar dollar increase in rent, regardless of whether this increase in area is from 50 to 51m2 or from 80 to 81m2

This assumption may be quite reasonable when the properties are similar and the resulting range of values is relatively small (as we have in the above example), but clearly we cannot push this assumption too far. If the range is particularly large, it is likely that the properties are not all comparable but, rather, fall into a number of distinct groups. It is largely a case of looking at the data we are studying and deciding whether the assumption is valid. If it is not, then simple linear regression *should not be used*.

There is, however, the possibility of using other forms of regression (eg non-linear regression), or the possibility of transforming the data (eg taking logarithms of one variable) so that the linearity assumption is valid. These alternatives, in themselves, involve a number of assumptions about the data, (see, for example, Whipple 1974).

While the other assumptions listed above are not unimportant, regression techniques are relatively insensitive if the data makes "small" departures from them and they are therefore not such a major concern. We hope to address this phenomenon in a later article.

It is worth noting that the assumption that the "error" term follows a normal distribution is not essential if the model is to be used for prediction. It may be needed if it is the regression coefficients (the estimates of a and bin the above model) on which

the analyst wishes to concentrate. However, this use of the regression model which features prominently in many articles on regression is not the prime motivation behind the use of regression techniques.

Application of selected statistical measures to the study

We will start by examining the impact of shop area alone on annual rental value within a single mall (Mall 1). The first step in such an analysis is to graph the data - the independent variable (Area) on the X-axis and the dependent variable (Annual Rent) on the Y-axis. Such a graph is called a "scatter plot" (see Figure 1).

Examination of the "scatter plot" reveals a very close linear relationship between area and rent value (ie the assumption of linearity is a most reasonable one). In this example (Fig 1), the larger the area the greater the resulting rent value. The sample correlation coefficient which, in statistics, is denoted by r is a form of reliability indicator. By way of a very simple explanation the closer the correlation coefficient is to 1.00 (or 1.00) the more likely it is that changes in the dependent variable (rent amount) are linearly related to changes in the independent variable (area). On the other hand, if r is close to zero, there is little linear association between the two variables.

In this instance, the correlation coefficient is 0.9867 and so there is a very strong probability that rental value will increase according to increases in area. While this will not be at all surprising to the experienced valuer, it does provide an illustration of how regression is related to the valuation process. The coefficient of determination (denoted as r2) indicates the proportion of the change in the dependent variable which is linearly associated with change in the independent variable. In this example, r2 = 0.9735 so that 97% of the variation in rents is linearly related to variation in area leaving only 3% of the variation in rents associated with other factors (such as length of frontage, locational quality, time of lease, standard of finish, shape, non-linearity, etc).

Statistically, this data indicates avery close linear relationship between the two variables "shop area" and "annual rental value". The valuation implications are that, for this data set, shop area is an extremely reliable indicator of rental value.

Analyses for all malls provides the following results:

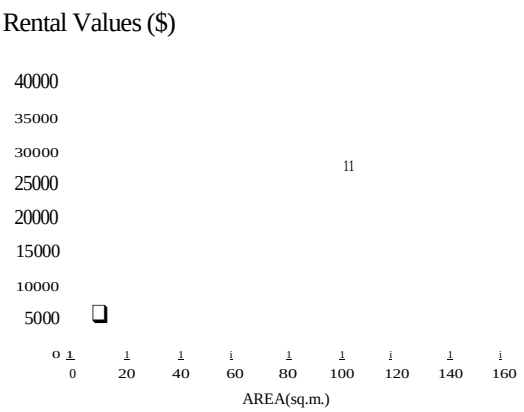
TABLE 3
Regression Equations for Rental Value Versus Area

Mall 1:
Estimated Rental Value = 6044.81 + 201.119 X Area (r = 0.9735)
Mall 2:
Estimated Rental Value = 1888.12 + 144.38 X Area (r = 0.8899)
Mall 3:
Estimated Rental Value = 6657.35 + 150.16 X Area (r = 0.9282)

It will be noted that in each case the linear regression model using only the one indicator variable (shop area) gives a very satisfactory fit to the rental value data (r2 values of 0.9735, 0.7920 and 0.8616 respectively for the three malls). The co-efficients in the separate equations do differ significantly (intercepts of 6044.81, 1888.12 and 6657.35; and slopes of 201.19,144.38 and 150.16 respectively).

These variations may be attributed to differences between the malls. Factors such as the different locations of the malls within a single commercial centre, different numbers of shops

FIGURE 1: RENTAL VALUE VS AREA



within each mall and substantially different architectural layouts contributed to these variations. In Mall 2 the fitted model performs less effectively than for Malls 1 and 3. The valuer would certainly have to investigate the effect of other indicator variables on rental value before assigning a final value. Multiple regression techniques may be of considerable assistance here.

This analysis would suggest that the malls are discrete and therefore unsuitable for "across the board" use as comparables.

The regression equations in Table 3 may now be used to predict the hypothetical rental values for our subject properties:

TABLE 4
PREDICTED RENTAL VALUES

Property 1 (in Mall 1):
Estimated Rental Value =6044.81 + 201.19 X 81.37
=22415.64

It can be shown that this estimate has a standard error of $370. The standard error gives a measure of uncertainty associated with the estimate of value. That is, we would estimate the rental value to be approximately $22,500.

Property 2 (in Mall 3):
Estimated Rental Value = 6657.35 + 150.16 X 62.90
= 16102.41

That is, an estimated rental value of approximately $16,000. In this case, the standard error is $520-larger than for Property 1 indicating that the estimate is slightly less reliable.

Similar analyses using"shop frontage" as the single indicator variable of rental value produced the following results:

TABLE 5
Regression Equations for Rental Value Versus Frontage

Mall 1:
Estimated Rental Value = 530.58 + 3016.31 X Front. (r = 0.8241)
Mall 2:
Estimated Rental Value = 5947.88 + 2578.97 X Front (r = 0.7485)
Mall 3:
Estimated Rental Value = 8077.54 + 1278.01 X Front (r = 0.8093)

It can be seen that, in each case, the results are not as good as those produced earlier using shop area as the sole predictor of rental value (Table 3). If a choice had to be made between using shop area or shop frontage as the predictor of rental value the choice would most definitely be to use shop area. The fact that the analysis produces such a result should be comforting to the experienced valuer who has traditionally used area rather than

frontage as the basis for such valuations. An interesting question, and one which will be addressed in the next article in this series, is whether frontage contains any additional information, over and above shop area, which is useful in arriving at a valuation of rent. Again, such a question can be addressed using multiple regression techniques.

Likewise, the passage of time exerts an uncertain influence on rental values. While the authors concede that an analysis using only time as an indicator of rental value is not generally appropriate, it is of interest in a general examination of trends within the data. The following results were obtained:

TABLE 6
Regression Equations for Rental Value Versus Time

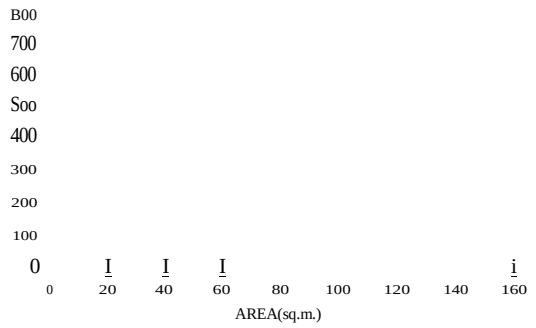
Mail 1:
Estimated Rental Value = 28873.84 + 124.19 X Time (r=0.0002)
Mail 2:
Estimated Rental Value = 198081.42 2116.15X Time (r = 0.1432)
Mall 3:
Estimated Rental Value = 94830.30 + 1301.08X Time (r = 0.2108)

It is certainly interesting to note that these correlation coefficients are all close to zero. This may be due to a number of factors including the following: the rents have been stable over the relatively short time frame involved; and/or time effects which may be present in the data are swamped by other more significant factors such as shop area.

A comparison of regression results with "traditional" valuation methods

The analysis above using shop area as the sole indicator of rental value produced an estimate of $22,500 for our subject property in Mall 1. It is interesting to compare this with a valuation produced by more typical means. If we use the data from Mall 1 as our comparables and accept that there has been no appreciation in rental levels over the time period, we are faced with using rates per square metre to perform the valuation. The following graph indicates the relationship between rental value per square metre and area of shop:

FIGURE 2: RENTAL VALUE PER SQUARE METRE VS AREA



It will be seen that the value per square metre declines as the area increases. For our purposes, the rate per square metre varies from $231 to $327. Application of these extreme values would place the annual rental value between $18,800 and $26,600. The valuer's expertise wouldbe applied to determine the appropriate figure. Simply stated, the process of linear regression does this automatically. The estimated valuation of $22,500 converts to rate of $276.51 per square metre.

Furthermore, although it is known that there is a degree of uncertainty in the conventional methods (ie two experienced valuers are unlikely to reach exact agreement, see Worthington 1987), they do not provide an estimate of this uncertainty. The measure of standard error provided by regression analysis, is, therefore, a valuable in itself.

Conclusion

In conclusion, the valuer is a data analyst who interprets the market, and tools such as those discussed facilitate this process. However, these methods are not restricted to particular fields of valuation practice potentially, they have very broad usage.

The valuation "model" considered in this paper is a simplistic one. It applies one variable only to the calculation of rental value. In fact, a number of variables will normally influence "value". These will include those already addressed (frontage, area and time) and possibly others.

Subsequent papers will illustrate how techniques such as "multiple regression" and data transformations can assist the valuer in the construction of a statistical model that will be of use in the valuation process. These techniques will provide the valuer with a number of important aids. These are:

i) to allow the valuer to predict "value" from more than one "indicator" variable;
ii) to indicate to the valuer the relative importance of each indicator of value; and
iii) to assist the valuer in determining which transactions may be considered "out of line".

Further papers in this sequence will examine the application of multiple regression techniques in contemporary valuation practice and will include additional analyses of the data presented here. It is stressed that while statistical techniques may appear complex and non-intuitive at first glance, their study and application offers considerable benefits to the practicing valuer. Modern computer packages provide the means by which these methods can easily, speedily and accurately be applied to property market analysis. A

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Doing More With Valpak

by R V Hargreaves

sers of Valpak 2 will have noticed a number of improvements since Valpak I. The improvements become most apparent to users when doing a sales search. With Valpak I users have to remember to use the correct computer syntax when specifying the search criteria. With Valpak 2 the problem of remembering syntax is overcome, since the search commands are specified from the on-screen menus.

Another bonus with Valpak 2 is that it has been designed to interface with other computer programs. This short article outlines the steps used to interface Valpak 2 with a standard spreadsheet program, and some of the benefits that can accrue from this. Integrating the file management capabilities of the Valpak 2 program with the `number crunching' power of a spreadsheet enables the valuer to carry out detailed sales analysis. For the purposes of illustration we will assume that a valuer has an assignment to value several residential sections in Palmerston North. The client has asked the valuer to comment on the 1989 trends in the section market, including sales volumes, and prices analysed on a m2 basis.

Step 1. The Valpak Search

Carrying out a search using the category for vacant residential (VR) reveals approximately 350 section sales in the data base. A further search on just 1989 sales narrows the number down to just over 300.

A quick screen search through the data shows that there are several obvious mistakes in the data. In this case they are properties with new houses that still show up with a VR category. These sales are excluded from the data and the sales file is ready to be dumped to a hard disk or floppy disk.

Step 2. File Dump

The next step is to take the section file that has been created and store it in a form suitable for spreadsheet analysis. Valpak 2 provides several formats for displaying the fields of data. The program also gives the user a choice of computer formats so that the spreadsheet can recognise a Valpak 2 file. The file dump procedure is then executed from the Valpak 2 Transfer file menu.

In our case we use the CSV format which is compatible with the spreadsheet program "Quattro Pro". With "VP Planner" the data needs to be dumped to a DIF file rather than a CSV file. Quattro Pro is very similar to "Lotus 123" and has a Lotus emulation mode that uses the same commands as Lotus.

Step 3. Importing the Valpak File into the Spreadsheet

This is executed from the spreadsheet Tools menu. The user selects the Imports sub menu from Tools and specifies the "Only Commas" format.

This prompts for a file name and the user specifies the directory and file names used under the dump command. For example, if we have saved the file as "SECTIONS.CSV" on the hard disk then it can be retrieved by typing "C:/VP2/SECTIONS.CSV". In this case VP2 is the name of the directory.

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Step 4. Editing the Spreadsheet

When the Valpak 2 sales information is imported into the spreadsheet, data is placed in the first available cells. An example of the resulting format is presented in Table I. It is noticeable that the field headings are missing, and blank entries (as in the case where there is no street address) are showing as zeros on the spreadsheet.

TABLE 1. UNFORMATTED

504 Church St E	20/3/89	20750	22000	22000	0.0334
632 Ferguson St	20/3/89	25000	16500	16500	0.0318
0 Hillcrest Dr	20/3/89	22000	19500	19500	0;0675
0 Springdale Gr	20/3/89	24250	31500	31500	0.0524
7 Fraser Ct	21/3/89	52530	54000	53000	0.1018
88 Salisbury St	21/3/89	24000	20500	19700	0.1841
0 Tiller Close	21/3/89	15900	18500	18500	0.0629
0 Cherry Lane	29/3.89	63500	55000	55000	0/0824
0 Amberley Ave	31/3/89	42250	42500	42500	0.0894
0 Benmore Av	31/3/89	23400	22000	21700	0.0659
25 McLeavey Dr	31/3/89	16700	18500	18500	0.0648
0 Heathcote PI	3/4/89	28050	26000	26000	0.0872
19 McLeavey Dr	3/4/89	15900	18500	18500	0./0648
0 Tudor Heights	3/4/89	28050	0	0	0.0872
7 Dahlstrom Gr	5/4/89	17500	19000	19000	0.0855

The appearance of the spreadsheet can be improved by widening the existing columns. Extra rows can be inserted at the top of the spreadsheet to provide space for labelling the column headings and naming the spreadsheet. These alterations can be accomplished very quickly by using the copy command to make changes to blocks of cells rather than individual cells. Extra columns can also be inserted as required. Street numbers that show up as zeros can be restored to blanks by using the search and replace command from the edit menu. Table 2 (opposite page) shows the reformatted spreadsheet.

Step 5. Data Analysis

The developers of Valpak 2 realised that there are many different ways of analysing sales data, and it was probably not worth the expense of building a comprehensive analysis package into the program. The type of analysis depends on the particular

Table 2: Formatted PALMERSTON NORTH SECTION SALES

Number	Street	a Sle Date	Sale Price	Capital Value	Land Value	Area	rce/M2
504	Church St E	20/3/89	20750	22000	22000	0.0334	62.1
632	Ferguson St	20/3/89	25000	16500	16500	0.0318	78.6
0	Hillcrest Dr	20/3/89	22000	19500	19500	0;0675	32.6
0	Springdale Gr	20/3/89	24250	31500	31500	0.0524	46.3
7	Fraser Ct	21/3/89	52530	54000	53000	0.1018	51.4
88	Salisbury St	21/3/89	24000	20500	19700	0.1841	13.0
0	Tiller Close	21/3/89	15900	18500	18500	0.0629	25.3
0	Cherry Lane	29/3.89	63500	55000	55000	0/0824	77.1
0	Amberley Avel	31/3/89	42250	42500	42500	0.0894	47.3
0	Benmore Av	31/3/89	23400	22000	21700	0.0659	35.5
25	McLeavey Dr 1	31/3/89	16700	18500	18500	0.0648	25.8
0	Heathcote P1	3/4/89	28050	26000	26000	0.0872	32.2
19	McLeavey Dr	3/4/89	15900	18500	18500	0.0648	24.5
0	Tudor Heights)	3/4/89	28050	0	0	0.0872	32.2
7	Dahlstrom Gr	5/4/89	17500	19000	19000	0.0855	20.5

valua
tion assignment and the individual valuer. One of the nice things about spreadsheets is that they are very flexible, and the type of analysis can easily be customised to suit the individual user.

In our example there is a large sales file of 300 sections to analyse. Let us assume that the valuer wishes to calculate the price per m2 for the sections. This can be rapidly accomplished by setting up a new column and dividing price by size. As the size is expressed in hectares it is necessary to multiply by 10,000 to convert the answer to m2. Advanced spreadsheet users may find that it is useful to create `macros' to store and replay formulas that are used every time the Valpak 2 data is analysed. One problem experienced is that the Quattro Pro program does not recognise the Valpak 2 date format. The author would be interested in hearing from anyone that has overcome this problem.

Step 6. Using the Graphics Option

Most of the Lotus 123 and similar programs have a graphics capability. Quattro Pro also has a good graphics.

When searching for trends with large numbers of sales data graphics can be particularly useful. Figure 1 utilises a bar chart to show the monthly volume of sales in Palmerston North for the second half of 1989. While demand remained strong during this period, sales volume reduced due to a shortage of sections on the market.

Step 7. Adding Data to Spreadsheets

Many valuation assignments require more information on the sales than is contained in Valpak.

For example, rural valuers usually require information about the carrying capacity of a property and the production being achieved.

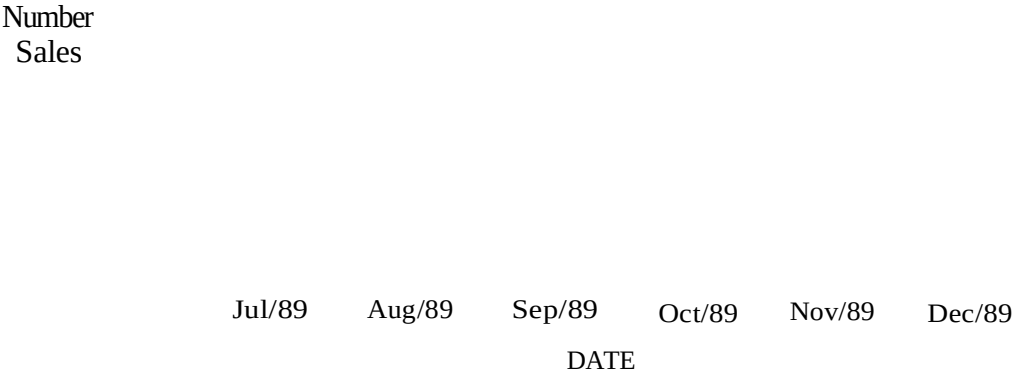
Where this is known the valuer simply creates a new column for, say, stock units carried and then enters the information. This information can then be analysed by creating further columns for stock units per ha, price per stock unit land value, and price per stock unit capital value.

Summary and Conclusions

The data base capabilities of the spreadsheet programs can be used to store and retrieve the new files that have been created. It is this author's experience that Valpak 2 is more efficient at sorting the sales than is the spreadsheet program. Thus the user wants to be sure that the sales file copied from Valpak 2 to the spreadsheet is the actual data to be analysed.

Interfacing Valpak 2 with spreadsheets is a first step in utilising the power of the computer to analyse sales data. Advanced valuation students at Massey have already taken the next step which is to use a statistical program such as SPSS.PC to undertake more sophisticated analysis. A

FIGURE 1 : PALMERSTON NORTH
SECTION SALES VOLUME



IN THE HIGH COURT OF NEW ZEALAND
CHRISTCHURCH REGISTRY

C.P. No. 298/89

BETWEEN UNITED SHAREBROKERS LIMITED
Plaintiff

AND LANDSBOROUGH ESTATES LIMITED
First Defendant

AND JOHN NEVILLE BEAUFORT WALL
Second Defendant

Hearing: 14 May 1990
Counsel: P L O'Brien for Palintiff
S R Maling for First Defendant
A J Forbes for Second Defendant (Leave to withdraw)
Judgment: 18 May 1990

JUDGMENT OF TIPPING J

This is a case in which the award of an umprie in a rental arbitration is challenged for misconduct and error of law on the face of the award. The Plaintiff, United Sharebrokers Ltd, is the lessee by assignment of premises owned by the First Defendant Landsborough Estates Ltd. The demised premises constitute the second floor of a building situated at 287 Durham Street Christchurch and known as Landsborough House.

Pursuant to a deed of lease dated 31 August 1987 assigned to the Plaintiff by deed dated 5 December 1988, the First Defendant has leased the second floor of Landsborough House to the Plaintiff for a term of tenyears from 1 February 1987.Therentalpayableby thelessee is to be reviewed at two yearly intervals, the first review being due on 1 February 1989. The parties were unable to agree upon the rental payable for the period of two years commencing 1 February 1989 and in terms of the lease the matter was referred to arbitration.

The subject is governed by clause 3(j). This constitutes a detailed and elaborate formula for determining rent reviews. If the parties cannot agree each is required to appoint a valuer, being a member of the New Zealand Institute of Valuers, "to jointly determine the current market rent of the premises". Before proceeding with their determination the two valuers must agree upon and appoint an umpire who is also required to be a member of the said Institute. The nominated valuers are required within one month of the date of their appointment jointly to determine the current market rent of the premises "in relation to comparable premises as at thatparticularreview date". If thevaluers are unable to agree, the current market rent is to be determined by the umpire.

Clause 3(j)(vi) provides that in determining the current market rent the valuers or the umpire shall:-

(aa) be deemed to be acting as expert(s) and not as arbitrators(s);

(bb) consider any other use to which the Premises may be lawfully put;

(cc) have regard to the (sic) abnormal use of the Building or Premises and/or services by the Lessee;

(dd) exclude the value of any goodwill attributable to the Lessee's business and the value of the Lessee's fixtures and fittings in the Premises and shall also exclude any deleterious condition of the Premises if such condition results from any breach of any term of this Lease by the Lessee;

(ee) have regard to the terms and conditions of this Lease and in particular to any liability on the part of the Lessee in terms of this Lease to pay a contribution to the Operating Expenses of the Building.

By letter dated 20 March 1989 the solicitors for the lessor set out certain supplementary points which had been agreed in addition to the matters covered by the relevant provisions of the lease. By this time the lessor had appointed Mr R H Fright as its valuer and the lessee had appointed Mr R K Baker. In their letter the lessor's solicitors set out what was to happen procedurally and also the time frame within which the proceedings before the umpire were to be conducted, should the valuers on either side be unable to agree. In particular, it was provided:-

> "The umpire is to undertake to make his determination in writing to both sides by 30 April 1989 giving reasons for and the basis of his determination".

As it transpired Messrs Fright and Baker were unable to agree and the matter went to their umpire the Second Defendant Mr J N B Wall of Wellington. The procedure agreed for the proceedings before the umpire was followed and in due course Mr Wall published an award which is in fact undated but nothing turns upon that. Accompanying his award was a document constituting seven typed pages headed "notes to Landsborough House Second Floor Christchurch Arbitration". The first paragraph of the notes said that they were not intended to be nor should they be taken as part of the award. As will appear later an issue arises between the parties as to whether or not these notes do in fact form part of the award.

In its original statement of claim the Plaintiff lessee appeared to be relying solely on allegations of misconduct on the part of the umpire, that word having in this field an extended meaning not necessarily implying misconduct in the strict sense. At the hearing Mr O'Brien tendered an amended statement of claim seeking to allege error of law on the face of the award as well as misconduct. Mr Maling was prepared to meet this additional attack on the award and consequently I gave leave to file the amended pleading. Mr O'Brien made it plain that although he was not abandoning his allegations of misconduct, the main thrust of his client's case was that there was an error of law on the face of the award.

The statement of claim describes the main purport of the cases presented by Messrs Fright and Baker to the umpire as follows. Mr Fright's submission and evidence was that within the Christchurch market there were three rental levels, namely new leasings, renewals of existing leases and rent reviews within existing leases. It was Mr Fright's argument, supported by evidence, that there should be a different approach and different considerations should be taken into account when an umpire was assessing current market rentals under the different alternatives. It was his contention that in the present case the rent payable during the review period in question should not be influenced by or determined in the light of factors or market forces applying to new leasings or renewals of existing leases.

Mr Baker, the valuer for the lessee, contended however that both at law and in equity there should be no difference in assessing current market rentals whichever of the three alternative situations the umpire was considering. It was submitted that it was the umpire's duty to consider all relevant evidence, including evidence relating to new leases and renewals of existing leases and certain payments and inducements and other incentives or concessions that it was said were being offered to tenants in the Christchurch business area who were contemplating taking on new leases or renewing an existing lease. The need for such incentives and concessions was said to derive from the amount of vacant office space available in the Christchurch business district.

The Plaintiff's argument is that in reaching his decision the umpire accepted the submissions of Mr Fright and either failed to consider the matters raised by Mr Baker or failed to give them sufficient weight. It is then contended that in reaching his decision in this way the umpire misconducted himself or the arbitration by failing to take into account or failing to give sufficient weight to the submissions of Mr Baker in that the umpire is said to have failed to take into account all relevant matters or to have taken into account irrelevantmatters. I do not seehow it can possibly be said that the umpire took into account irrelevant matters because there is no suggestion that the points put up by the valuers on either side were irrelevant to the issue before the umpire. Indeed Mr O'Brien in his submissions did not seem to me to advance

the allegation that the umpire had taken into account irrelevant matters.

The Plaintiff then contends that the umpire determined his award on the basis of an incorrect application of the law and/or the relevant evidence, with the result that the rent fixed has been incorrectly determined and is higher than the current market rent payable in terms of the lease. There is then the bald pleading that there is an error of law on the face of the award. I shall deal with the rival contentions under three headings, first misconduct, second what constitutes the award and third whether there is an error of law on the face of the award.

MISCONDUCT

As already indicated the word "misconduct", which is to be found in s.12(2) of the Arbitration Act 1908, has a special and extended meaning for the purposes of arbitration law. The circumstances in which an arbitrator may be found to have misconducted himself or the proceedings are conveniently collected *inHalsbury* 4th edition volume 2 at paragraph 622. There the learned author says that it is difficult to give an exhaustive definition of what may amount to misconduct on the part of an arbitrator or an umpire. It is true to say however that most heads of misconduct have a procedural flavour.

There is in the present case no suggestion of procedural irregularity. It seems to me that the lessee's complaints on this aspect of the case boil down essentially to the proposition either that the umpire effectively ignored the submissions and evidence presented by Mr Baker or that he gave insufficient weight to them. I asked Mr O'Brien whether he had any authority to support the proposition that it was misconduct if an umpire could be shown to have ignored, in the sense of giving no or insufficient weight to certain evidence. Mr O'Brien indicated that he had no authority directly on that point.

That is hardly surprising because in my judgment it is entirely for an arbitrator or umpire as to what weight, if any, he gives to the evidence presented to him and indeed to the submissions which are tendered on each side: see inter alia the recent unreported judgment of Fisher, J in *Fencible Court Howick Ltd v Howick Borough Council* M.481/87 Auckland Registry (judgment 9/6/89) at page 21. It is not misconduct to come to a decision considered by the Court to be wrong on the facts or indeed on the law. In *Gillespie Bros & Co v Thompson Bros & Co* (1922) 13 L1.L.Rep. 519 at page 524 Atkin, L J said:-

> "It is no ground for coming to a conclusion on an award that the facts are wrongly found. The facts have got to be treated as found. ..Nor is it a ground for setting aside an award that the conclusion is wrong in fact. Nor is it even a ground for setting aside an award that there is no evidence on which the facts could be found, because that would be mere error in law, and it is not misconduct to come to a wrong conclusion in law and would be no ground for ruling aside the award unless the error in law appeared on the face of it..."

The position is put this way in *Russell on Arbitration* 20th edition (1982) at page 422 where the learned authors say:-

> "It is not misconduct on the part of an arbitrator to come to an erroneous decision, whether his error is one of fact or law and whether or not his findings of fact are supported by evidence."

Reference can also be made to *Commercial Arbitration by Mustill & Boyd* 2nd edition (1989) atpage 560 to the same effect and *The Vasso* (1983) 2 Lloyds Rep 346 at 350.

In New Zealand this line of authority is exemplified by the decision of the Courtof appeal *inManakauCity Council v FletcherMainlineLtd* (1982) 2 NZLR 142 where at page 146 Woodhouse, P adopted the statement from *Russell* mentioned above. The unwillingness to characterise perceived errors of fact as amounting to misconduct goes back in New Zealand at least as far as the decision of Stout, C J in *Mayor of Wellington vAitkenWilson & Co* (1914) 33 NZLR 897.

Mr O'Brien was quite right when he suggested that if the Plaintiff was to succeed at all it must on the ground of error of law on the face of the award. There is absolutely no foundation in the present case for any finding of misconduct by the umpire and the Plaintiff's submissions in this respect are rejected.

WHAT CONSTITUTES THE AWARD?

In this case theumpire's formal award simplyrecites the procedural history and then awards the sum of $84,799.00 per annum as being the current market rental of the demised premises in accordance with the lease document for the review period in question. In his award the umpire records that he has fully considered the lease document, the procedural matters referred to in the letter from the lessor's solicitors, the valuers' initial submissions and their counter-submissions and he then goes on to set the rental figure. Mr O'Brien contended that the seven pages of notes outlining the umpire's approach to the matter and his process of reasoning did in this particular case form part of the award. He recognised that he started off with a preliminary difficulty in that the umpire indicated right at the start of the notes that they were not intended to be nor should they be taken as part of the award.

Mr O'Brien pointed to the fact that in the letter of instructions the umpire was required to make his determination in writing giving reasons for and the basis of his determination. It was suggested that if the umpire had not published reasons he would have been guilty of misconduct but that does not necessarily mean that the published reasons were required to be published as part of the award. Mr O'Brien recognised that a statement such as that made by the umpire in the present case to the effect that the accompanying reasons were not intended to be part of the award, would often be decisive of the matter. He referred to *CBI NZLtd v Badger Chiyoda* (1989) 2 NZLR 669 at 673 per Cooke, P. However in that case the submission document required reasons to be stated but expressly provided that they should not form part of the award.

Here the parties agreed that reasons should be given but did not expressly state whether they should form part of the award. The umpire has construed his instructions as not requiring that his accompanying reasons be incorporated in the award. The parties did not make the point clear and in my judgment the umpire was perfectly entitled to adopt the course which he did. For there to be an error of law on the face of the award there must be such an error by express exposition, not merely by inference. The error must appear either in the award itself or in a document actually incorporated therein, for instance a note appended by the arbitrator stating the reasons forhis decision: *seeChampseyBhara & Co v Jivraj Balloo Spinning & Weaving Co Ltd* (1923) AC 480,486 PC and *Wellington City vNational BankofNew Zealand PropertiesLtd* (1970) NZLR 660, 669 per North, P.

In the more recent decision of the Privy Council in *Max Cooper & Sons Pty Ltd v University of New South Wales* (1979) 2 NSWLR 257, it was held that whether a collateral document forms part of the award depends primarily on he arbitrator's intention. It is normally a matter to be inferred from the documents which he has prepared. It was further said that even if the award itself refers to the existence of another document that in itself is neutral; it raises no presumption that such other document is incorporated as part of the award. Importantly their Lordships were of the view that unless the intention to incorporate is clear there should be a presumption against incorporation.

Essentially therefore the test is whether or not the arbitrator or umpire intended the collateral document to be part of his award: see the judgment of Somers, *J inManakau City v Fletcher Mainline* where His Honour said at page 160:

> "There can be no doubt that the issue is one of intention."

It is abundantly clear that in the present case the umpire far from intending that his several pages of notes should form part of the award, expressly driected that they should not, nor should they be taken to be part of the award. As to Mr O'Brien's point that the umpire may have been guilty of misconduct in that, having been required to state the reasons for his determination, he has ended up by stating reasons in a way which deliberately kept them out of his award, there are two answers to that both of them advanced by Mr Maling. First the Plaintiff did not plead any such misconduct on the part of the umpire, in spite of the fact that misconduct generally was pleaded. Secondly the lease is entirely silent as to whether or not the arbitrator or umpire must deliver a speaking award.

The requriement of giving reasons was introduced in the procedural letter from the lessor's solicitors already mentioned. That letter did not expressly require the reasons to be given as part of the award. In the same way as in a case of doubt the Court will presume that an arbitrator did not intend to incorporate his reasons in the award so in my view if the parties simply state that reasons are to be given without expressly stating whether or not the reasons should form part of the award, the arbitrator or umpire will not have misconducted himself by

coming to the view that the reasons are to be given outside the award.

It is my judgment therefore that the umpire's award in the present case does not include the seven pages of notes. That being so Mr O'Brien acknowledged that he could not advance his submissions any further because there is beyond doubt no error of law on the face of the arbitrator's award, if one excludes the seven pages of notes. I shall however, in case I be wrong, proceed to consider what the position would have been if the seven pages of notes had formed part of the formal award.

ERROR OF LAW ON THE FACE OF THE AWARD

In paragraph 7 of his notes the umpire recorded the two valuations which had been submitted to him by Messrs Fright and Baker. He expressly recorded Mr Baker's contention that the rental figure should be discounted by 10% because Mr Baker was of the view that the current rental market for comparable premises was not normal, th*ere* being a great deal of surplus office accommodation. Mr Baker had produced evidence of discounted rentals for this reason and also of inducements given by lessors to lessees in other ways. The umpire went onto say that on the surface in the current (February 1989) Christchurch leasing market it might be relevant to apply a discounting factor in certain circumstances to arrive at the market rental.

He then recorded the submissions of Mr Fright on the point and indeed the evidence produced by Mr Fright and recorded further Mr Baker's strong submission that both at law and in equity there should be no difference in assessing rentals under the three alternative situations, namely new leases, renewals of existing leases and reviews of rental within existing leases. The umpire then went on to say:-

> "With respect to Mr Baker's view that situation, however equitable it may be, is not supported by the evidence of Mr Fright which he clearly documents, and on that evidence I am convinced there is a difference in the rental that a landlord can expect under a rent review as at February 1989 compared with the leasing of vacant space in particular and to a lesser degree rental renewals."

He added:-

> "Having accepted that this situation exists in Christchurch as at the beginning of the 1989 *year*, the difference between the valuers is narrowed considerably."

Without the 10% discount Messrs Fright and B aker were $1.70 per square foot apart. With Mr Baker's 10% discount, for the reasons he advanced, the valuers were $3.30 per square foot apart.

Mr O'Brien suggested that the lease itself did not define the way in which "current market rent" was to be assessed. Withrespect this is not correct. Clause 3(j)(vi) set out above gives fairly precise driections to the valuers or the umpire as to what matters they shall take into account in determining current market rent. They are deemed to be acting as experts and not as arbitrators. Then follow the other matters of which a crucial point is that the umpire must have regard to the terms and conditions of the lease. So there is significant guidance to the valuers or the umpire, as to the matters to be taken into account, albeit that there is not, I acknowledge, any specific definition of the expression "current market rent".

Mr O'Brien referred to a number of cases starting with the decision of the High Court of Australia *inSpencer v Commonwealth ofAustralia* (1907) 5 CLR 418. That was a case involving the assessment of the value of land taken back under statutory powers and it adopted the familiar willing vendor/willing purchaser approach. Coming closer to the present time Mr O'Brien mentioned the decision of Donaldson, J in *F R Evans v English Electric Co Ltd* (1977) Estates Gazette (judgment 25/2/75). That case involved what was described in the lease as "the full yearly market rental". That definition was expanded to include the rental which the demised premises were worth to be let with *vac*ant possession on the open market as a whole between a willing lessor and a willing lessee. That is completely different from the present case.

In the *Evans* case Donaldson, J indicated that the formula adopted in the lease before him involved an assessment of what a hypothetical willing lessee would agree to pay and what a hypothetical willing lessor would agree to accept. As already observed in the present case one of the factors to be taken into account is the terms of the lease between the parties. The parties in the *Evans* case had provided their own dictionary for the arbitrators. In this case a dictionary has been provided to an extent, but it is a different exercise altogether. Mr O'Brien then referred to the case of *Segama N Vv Penny Le Roy Ltd* (1984) Estates Gazette Digest 74. That was an appeal heard by Staughton, J from arbitrators. In that case also the crucial expression"the market rent" was the subject of an internal definition involving premises with vacant possession. The case seems to have been involved primarily with questions of the admissibility and ambit of evidence.

Coming back to the essential question I do not see any of these authorities as aiding Mr O'Brien's submission that there is an error of law on the face of the award, treating the award as including the seven pages of notes for present purposes. Mr O'Brien was in essence driven to submitting that the error of law which was apparent was that the umpire had effectively ignored the evidence as to rates set for new leases and renewals. The essence of the Plaintiff's complaint is that if one leaves out of account evidence of market rentals in cases of new leases or renewals then one will end up with a higher rental figure than is justified.

It seems to me that if clause 3(j)(iv), which speaks of comparable premises, is read together with the umpire's obligation to have regard to the terms and conditions of the instant lease, he, the umpire is certainly entitled to take particular heed of comparability, both in respect of the premises themselves and inrespect of similarity of tenure. In other words, to get a truly comparable situation one needs to look at premises as similar as possible to the subject premises and cases where the lessee is the subject of a rent review rather than the subject of a new lease or the renewal of an existing lease.

In my judgment it is not a case where the umpire has been shown to have ignored Mr Baker's submissions or his evidence. It is a case where he has preferred the approach of Mr Fright in circumstances where he was perfectly entitled to do both as a matter of assessing competing considerations and by dint of the fact that he had been appointed to do the adjudication because of his qualifications and expertise in the field. There is no foundation whatever for the proposition that Mr Baker's evidence and submissions were put on one side without being considered. Mr Baker's points were obviously considered by the umpire. The fact that they were not adopted is unfortunate for the Plaintiff but cannot possibly amount to an error of law.

In any event even if I were satisfied that the umpire was in error, and I am far from being so satisfied, it seems to me that at best from the Plaintiff's point of view the umpire would have made an error of fact rather than an error of law. There is no recognised principle of law which the umpire is shown not to have followed. The umpire's crucial finding, as demonstrated by his reasons, is the proposition that he was convinced on the evidence that there was a difference in the rental that a landlord could expect under a rent review compared with the leasing of vacant space and to a lesser degree the case of rental fixed on a renewal. There was no room in my judgment for the umpire to adopt an unvarnished hypothetical lessor/lessee exercise because the reality of the matter was that the lessor and the lessee were contractually bound in respect of the subject premises for the balance of the term.

No doubt what constitutes current market rental is not an easy matter to determine in those circumstances, but I do not regard that essential question as being simply a question of law. It is in reality a mixed question of fact and law. The key point for present purposes is that the umpire is not shown to have misdirected himself in law, or to have overlooked any relevant principle of law in coming to his assessment of current market rent. Indeed the matters which an expert umpire is obliged to take into account in a case of this kind are essentially a question for his expert assessment after having listened carefully to the evidence and representations that the parties wish to put to him. In short I can discern no error of law on the face of the umpire's award, even treating the seven pages of notes as incorporated therein.

Neither of the grounds upon which the Plaintiff as lessee seeks to have the umpire's award set aside have been established. The application is accordingly dismissed. I record that Mr Forbes appeared at the commencement of the hearing on behalf of the umpire who had been joined as Second Defendant. He indicated quite properly that the umpire wished to abide the decision of the Court but sought the right to be heard on questions of costs. As requested all questions of costs are reserved. If agreement cannot be reached memoranda may be filed or the parties, if preferred, may arrange to have the matter re-listed for argument on the point. A

Professional Directory

NORTHLAND

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